

Bay Area Air Quality Management District
375 Beale Street, Suite 600
San Francisco CA 94105

VIA EMAIL

vdouglas@baaqmd.gov
Victor Douglas

May 8, 2017

**RE: Comments on the Draft Environmental Impact Report for Regulation 11-18:
Toxic Risk Reduction Rule (Rule 11-18) and Regulation 12-16: Petroleum
Refining Facility-Wide Emissions Limits (Rule 12-16)**

Dear Mr. Douglas,

The Bay Area Air Quality Management District (“Air District”) has an historic opportunity to address the local pollution and climate change impacts from the refining industry’s shift to more polluting and hazardous oils. Over the past few years, the Bay Area has seen a flood of proposed refinery expansion projects to enable the refining of lower quality oil feedstock. Rule 12-16 (hereafter also referenced as “Emission Caps”) protects public health and the climate from potentially irreversible air pollution impacts that this industry wide shift in crude oil feedstock threatens to cause.

This comment is accompanied by refinery¹ and health expert reports that demonstrate the potential for disparate and significant local health effects of this refinery oil switch. Those impacts are greater on vulnerable populations across the region, and increasingly disparate and severe on the most vulnerable communities nearest refineries. Rule 12-16 could prevent refinery greenhouse gas and particulate matter air pollution from increasing by 40–100%. Rule 12-16 could also prevent 800–3,000 premature deaths due to increasing refinery particulate pollution in the Bay Area over 40 years, and prevent a disparately severe mortality burden 8–12 times the region wide burden from pollution in communities within 2.5 miles of refineries.

Emission Caps are a reasonable, no cost and no impact preventative response that place facility wide emission limits on Bay Area refineries, preventing any combustion emission pollution increases and reducing the risk of pollution spikes from hazards such as the August 2012 Chevron Richmond Refinery fire.

Unfortunately, the Draft Environmental Impact Report for Rule 12-16 (“DEIR”) largely ignores the air pollution concerns underlying the rule. As the DEIR fails to

¹ Expert report of Greg Karras regarding the DEIR, May 2017 (“Karras 2017”).

adequately acknowledge that essential issue, it cannot inform the Air District Board of Directors and the public of the significant environmental impacts that Rule 12-16 is designed to prevent. Failure to present the true purpose of Rule 12-16 directly impairs the legal defensibility of the urgently needed preventative measure. Compounding this error, the Air District mischaracterizes Rule 12-16 as a mere policy recommendation from Communities for a Better Environment (“CBE”) “and their associated organizations.” This prejudices any objective review of Rule 12-16. The DEIR thus fails as an informational document.

As set forth below, the DEIR suffers from numerous deficiencies that render it inadequate under the California Environmental Quality Act (“CEQA”)² and the CEQA Guidelines.³ We respectfully request that the Board of Directors reject the DEIR as an environmental review document, and direct staff to revise the DEIR to comply with CEQA. Furthermore, for the reasons outlined below, time is of the essence. The Air District is on schedule to meet its September 2017 hearing to consider adoption of Regulation 13, Rule 1, Facility Wide GHG Limits (“Rule 13-1”). There is ample time to revise the DEIR in time for consideration of Emission Caps and Rule 13-1 concurrently for adoption this September.

As detailed more fully below, in order to comply with CEQA, the DEIR must be corrected as follows:

1. Revise the Environmental Setting, No Project Alternative and other sections of the DEIR to disclose and evaluate the Bay Area industry trend to refining lower quality oils and the resultant foreseeable increases in pollution from Bay Area refineries;
2. Revise the Project Description and other sections of the DEIR to describe the preventative purpose of Rule 12-16, in particular regard to preventing disparately severe increases in pollution and public health impacts on vulnerable populations, especially in communities located in close proximity to refineries, and how compliance may be achieved at no cost and no environmental impact; and
3. Prepare a DEIR for both Rules 12-16 and 13-1 on the current schedule for Rule 13-1 so that both rules may be considered for adoption, and potentially together as the environmentally superior alternative to each Rule alone, in September of this year.

I. The DEIR Fails to Include an Accurate Environmental Setting

The DEIR details the existing environmental setting in the Bay Area in regards to several environmental areas: air quality; climate change and greenhouse gas (“GHG”) emissions; hazards; hydrology and water quality; noise; transportation and traffic; and utilities and service systems. However, each of these sections ignores the project objectives of Rule 12-16 and therefore provides an inaccurate and irrelevant analysis of

² Pub. Res. Code § § 21000 *et seq.*

³ 14 Cal. Code Regs. § § 15000 *et seq.*

Emission Caps, placing a misplaced focus instead on the environmental impacts of the installation of pollution control equipment.⁴

As stated in the DEIR, the objectives of the Emission Caps are to:

- Protect air quality, public health, and the climate from increases in annual facility- wide mass emissions of GHGs, PM, NOx, and sulfur oxides (SOx) *caused by changes in refinery oil feed quality or quantity, refinery or support equipment or operation, or combinations of these causes*, by preventing any significant increase in these emissions;
- Protect the climate and public health by preventing any significant increase in these emissions at refineries and associated facilities *from increasing the emission intensity* of the production of transportation fuels;
- Protect community and public health by preventing any significant increase in these emissions from worsening hazards for which HRA methods may not account, including but not limited to *acute and chronic ambient PM, NOx, SOx, and PM exposure hazards*;
- Complement other air quality, public health, and climate measures by *discouraging investment in new refinery equipment that would lead to increased emissions* of GHG, PM, NOx, or SOx from Bay Area refineries.⁵

We emphasize that each of these objectives aim to address increasing combustion emissions from refinery operations processing a lower quality oil feedstock, such as Canadian tar sands-derived oils, and other similarly “heavy” oils. Nevertheless, in its discussion of the Environmental Setting, the DEIR omits critical discussion of the recent Bay Area refinery expansion projects, such as the Chevron Richmond Refinery Modernization Project, that would enable increased refining of these same oils.

CEQA Guidelines § 15125(c) provides that “[k]nowledge of the regional setting is critical to the assessment of environmental impacts [and] [s]pecial emphasis should be placed on environmental resources that are rare or unique to the region.” The courts have affirmed this principle, holding that the absence of accurate and complete information regarding the project setting precludes the adequate investigation and discussion of the environmental impacts of the project.⁶ Evidently, the Air District has not corrected the deficiencies that we noted regarding the Notice of Preparation and Initial Study for the DEIR.⁷ Again, the DEIR fails to adequately describe the environmental setting in three

⁴ We note we agree with the Air District that refinery emissions will increase in the foreseeable future. The DEIR analysis of impacts from add-on controls to meet limits already met now assumes increasing refinery emissions, but it ignores this baseline condition in all other contexts. This contradiction makes its project description unstable as further detailed below.

⁵ DEIR at 2-4.

⁶ *San Joaquin Raptor/Wildlife Rescue Center v. County of Stanislaus* (1994) 27 Cal. App. 4th 713.

⁷ Those comments are referred to as the *December 2016 Legal Comment of 350 Bay Area, CBD, CBE, NRDC, and Sierra Club on the DEIR Scope* in this comment’s recommendations, are incorporated into this comment by reference, and attached as Attachment A.

significant respects: first, by omitting the current regional crude shift to a lower quality, and more polluting, oil feedstock; second, by omitting the disproportionate impact of such increased pollution on vulnerable populations and local low-income communities of color; and third, by omitting discussion of how that impact is emphasized by the contrast of growing foreign exports of fuel and decreasing domestic consumption.

A. The Environmental Setting Must Discuss the Trend Toward Refining Increased Volumes of Lower Quality Oils in the Bay Area

As noted in the Concept Paper for this rulemaking, the quality of crude imports to the U.S. has decreased over the past decades, as refineries have imported heavier and more sulfur-rich fuel.⁸ The Concept Paper continues: “the use of lower quality crude at refineries could...increase emissions of air contaminants...Emissions could also increase as a result of accidents related to the increased corrosiveness of lower quality crudes.”⁹

Furthermore, in its Response to Comments on the Initial Draft of Regulation 12, Rule 15, the Air District has acknowledged that “it is reasonable to expect” that the Bay Area refineries will “follow the general industry-wide trend towards increased processing of lower quality crudes,” and that processing these crudes tends to “cause more emissions.”¹⁰

The environmental concern surrounding shifting crude quality feedstock at Bay Area refineries is consistent with industry reports and data. The Society of Petroleum Engineers concluded in 2009 that Canadian tar sands offer “the most promising source for California refineries” to replace currently dropping crude supplies.¹¹ In addition, several of the Bay Area refineries, including Valero, Phillips 66, and Tesoro, have issued investor reports announcing plans to import Canadian crudes.¹² The Alberta Energy Resources Conservation Board and the Canadian Association of Petroleum Producers have also announced plans to export more tar sands oil for processing by California refineries.¹³ A 2007 report in *Oil & Gas Journal* describes industry plans to expand the market for price-discounted oil produced in the Canadian oil sands by, among other things, sending large amounts of this oil to California refineries as a new potential growth market.¹⁴ A 2015 Canadian Association of Petroleum Producers crude oil forecast, markets, and transportation report outlines plans for exporting more tar sands oil to California refineries via pipeline, ship, and rail.¹⁵ A 2015 report by CBE and

⁸ Petroleum Refining Emissions Tracking, Regulatory Concept Paper, *available at* http://www.baaqmd.gov/~media/files/planning-and-research/rules-and-regs/workshops/2013/1215_dr_rpt032113.pdf?la=en.

⁹ See Karras 2017.

¹⁰ *Id.*

¹¹ *Id.*

¹² *Id.*

¹³ *Id.*

¹⁴ *Id.*

¹⁵ *Id.*

ForestEthics identifies oil industry projects which could potentially replace up to 40–50% of California refinery crude feed by rail alone.¹⁶

Moreover, the Air District has permitted a series of these very refinery expansion projects that would enable the refining of these lower quality and more polluting oils. In 2013, the Air District permitted the Kinder Morgan Richmond Terminal Crude by Rail Project; in 2014, the Chevron Richmond Refinery Modernization Project; in 2015, the Phillips 66 Rodeo Refinery Propane Recovery Project. Other similar expansion projects in the Bay Area are currently proposed, such as the Nustar Shore Terminals LLC Selby Terminal Crude Oil Project. However, these projects, and the overall trend to the refining of lower quality oil feedstock in the Bay Area, are completely omitted from discussion in the Environmental Setting of the DEIR. Pursuant to CEQA Guidelines § 15125(c), the commenters therefore make the following recommendation:

Recommendation # 1: Revise sections of the Environmental Setting to disclose: the industry trend to refining lower quality oils in the Bay Area; recent and foreseeable refinery expansion projects or capacity to refine greater quantities of lower quality oils in the Bay Area; an estimate of the potential increase in combustion emissions (GHGs, particulate matter (PM), NO_x and SO_x) that Rule 12-16 is designed to limit; and the potential for emission increases as a result of accidents that Rule 12-16 is designed to prevent.

B. The Draft EIR Environmental Setting Must Include an Assessment of the Local and Disproportionate Impact of Refinery Pollution

Importantly, Bay Area refineries do not have any overall facility limits on pollution: “none of these facilities have an explicit stated overall mass emission limits that apply to the entire refinery.”¹⁷ Although the DEIR suggests that individual permit limits for individual sources within the refinery facility effectively limit pollution, the DEIR also admits that *all* Bay Area refineries have “grandfathered” emission sources that were not subject to New Source Review.¹⁸ By then mentioning that these same sources are also governed by Air District regulations, the DEIR misleads the public into believing that aggregating these individual source limits would essentially produce the same result as the proposed Emission Caps. In reality, however, aggregating individual source limits produce limits far above those set by Emission Caps, and far above the current production capacity of each Bay Area refinery.¹⁹ Aggregating individual source pollution limits therefore sets an overall facility-wide limit so impractically high that it is, in reality, no limit at all.

The commenters therefore make the following recommendation:

¹⁶ Krogh et al., 2015. Crude Injustice on the Rails: Race and the Disparate Risk from Oil Trains in California; report by Communities for a Better Environment and ForestEthics. June 2015, available at, <http://www.forestethics.org/news/crude-injustice-rails-california>.

¹⁷ DEIR at 3.2-16

¹⁸ *Id.*

¹⁹ This fact was confirmed by Air District Staff at the 30 March 2017 Open House on Emission Rules in Richmond.

Recommendation # 2: Revise sections of the Environmental Setting to disclose that aggregating individual source limits does not produce effective, overall, facility-wide pollution controls on Bay Area refineries.

This discussion is critical for the evaluation of how much pollution Emission Caps may prevent, and particularly for vulnerable populations and low income communities of color in close proximity to Bay Area refineries.

As noted in the November 11, 2016 comment on the NOP/IS submitted by CBE and other organizations, there is abundant evidence that refinery emissions disparately harm vulnerable populations, especially nearby low-income communities of color. We have illustrated several examples, including elevated indoor PM_{2.5} exposures in the homes of low-income residents of color in Richmond, increased exposure to ultra-fine PM from refinery sources, and elevated concentrations of emissions during episodic emissions from incidents such as the August 2012 Chevron Richmond Refinery fire.

The DEIR notes: “combustion of fossil fuels...[is one of the] primary contributors of directly emitted Bay Area PM_{2.5}.²⁰ The DEIR also states,

A consistent correlation between elevated ambient particulate matter (PM₁₀ and PM_{2.5}) levels and an increase in mortality rates, respiratory infections, number and severity of asthma attacks and the number of hospital admissions has been observed in different parts of the United States and various areas around the world. Studies have reported an association between long-term exposure to air pollution dominated by fine particles (PM_{2.5}) and increased mortality, reduction in life-span, and an increased mortality from lung cancer.

Daily fluctuations in fine particulate matter concentration levels have also been related to hospital admissions for acute respiratory conditions, to school and kindergarten absences, to a decrease in respiratory function in normal children and to increased medication use in children and adults with asthma. Studies have also shown lung function growth in children is reduced with long-term exposure to particulate matter. The elderly, people with pre-existing respiratory and/or cardiovascular disease and children appear to be more susceptible to the effects of PM₁₀ and PM_{2.5}.²¹

The DEIR’s analysis of local impacts from refineries ends there. At the same time, however, the accompanying Staff Report inconsistently claims that PM_{2.5} from refineries do not contribute to localized impacts, presenting a regional, rather than local, problem.²² The Staff Report arrives at this faulty conclusion by ignoring evidence for

²⁰ DEIR at 3.2-9

²¹ DEIR at 3.2-5

²² Final Draft Staff Report for Rule 12-16, available at <http://www.baaqmd.gov/~media/files/planning-and-research/rules-and-regs/workshops/2017/12-16-staff-report.pdf?la=en>, at 38.

disparately severe impacts on vulnerable populations regionally and in communities on refinery fencelines.²³

To the contrary, the Legislature has already made an explicit finding regarding this disproportionate impact of pollution. In 2006, the State enacted Assembly Bill No. 32 (“AB32”) that recognized the “disproportionate impacts from substandard air quality in the form of higher rates of respiratory illness, hospitalizations, and premature death,” and therefore directed public and private investment to these “most disadvantaged communities.” In 2012, the State enacted Senate Bill No. 535, which sought to identify those communities. Thereafter, the California Environmental Protection Agency and the Office of Environmental Health Hazard Assessment developed a science-based tool for evaluating multiple pollutants and stressors in communities, called the California Communities Environmental Health Screening Tool (CalEnviroScreen).

More recently, California’s adoption of Senate Bill No. 32 (“SB32”) codifies ambitious climate change goals requiring the state to reduce greenhouse gas emissions to 40% below 1990 levels by 2030.²⁴ The passage of SB32 (and its ambitious greenhouse gas reduction targets) was contingent on the enactment of companion legislation — Assembly Bill No. 197 (“AB197”).²⁵ AB197 was introduced to provide greater legislative oversight in developing and adopting methodologies to reduce climate change pollution. This is significant because AB197 calls for specific measures that make the Air District’s²⁶ promulgation of refinery greenhouse gas caps an essential component to achieving the state’s more aggressive climate change pollution targets.

Importantly, SB32 paired with AB197 calls for a marked change in how California will achieve its more ambitious climate change pollution reduction goals. SB32 and AB197 require that the state “achieve the more stringent GHG emission reductions in a manner that benefits the state’s most disadvantaged communities and is transparent and accountable to the public and the Legislature.”²⁷ AB197 requires regulators to consider and address climate change and related pollution impacts on California’s disadvantaged communities by considering the social costs of greenhouse gas emissions and implementing equitable solutions to mitigate the problem.²⁸ For example, while some regions of the state can afford to put more Teslas on the road, other regions that are disproportionately burdened by greenhouse gas and toxic polluting industries cannot. AB197 addresses this problem head-on by requiring regulators to prioritize the implementation of regulations that result in direct emissions reduction at large stationary sources in order to protect the state’s most impacted and disadvantaged communities.²⁹ In other words, the Legislature expressly conditioned passage of SB32 on adoption of companion legislation—AB 197—that favors “command-and-control”

²³ *Id.* at 39.

²⁴ Senate Bill No. 32: Global Warming Solutions Act of 2006: emissions limit (extends AB 32 and sets 2030 greenhouse gas emissions targets), available at https://leginfo.ca.gov/faces/billNavClient.xhtml?bill_id=201520160SB32.

²⁵ SB32 specifies that “it shall become operative only if AB 197 is enacted...”

²⁶ Air districts have primary authority over regulation of stationary source air pollution.

²⁷ SB 32 Sec. 1 (d); *see also* AB 197 Sec. 1 (c), (e).

²⁸ AB 197 Sec. 5.

²⁹ *Id.*

regulation over market-based and incentive programs for large stationary sources like refineries when necessary to cause actual emission reductions in disadvantaged communities.³⁰ The bill's analysis even acknowledges that direct regulation is necessary in such communities and must be prioritized to achieve statewide limits while mechanisms such as cap-and-trade may operate as backstops to achieve excess reductions.³¹

In pertinent part, AB197 provides:

[T]he state board shall ... consider the social costs of the emissions of greenhouse gases, and prioritize both of the following:

(a) *Emission reduction rules and regulations that result in direct emission reductions* at large stationary sources of greenhouse gas emissions sources and direct emission reductions from mobile sources.

(b) *Emission reduction rules and regulations that result in direct emission reductions* from sources other than those specified in subdivision (a).

AB197 explicitly acknowledges the need to consider the social, health and economic costs on disadvantaged communities as the basis for compelling direct regulation of greenhouse gas and local pollution specifically within the refinery sector.

Clarifying the state's position, on April 5, 2017, the Air Resources Board ("ARB") sent a letter to the Air District regarding three rules under consideration: Rules 11-18, 12-16, and 13-1.³² Echoing the language of AB197, ARB states that it:

... support[s] the intent of [Rule 12-16] and agree more can and must be done to deliver real reductions in the pollutants that are impacting the health of residents living near refineries ...

Finally, in September 2016, public health academics from UC Berkeley, USC, San Francisco State University and Occidental College produced the report, "A Preliminary Environmental Equity Assessment of California's Cap-and-Trade Program." The study assessed the inequities in the location of GHG-emitting facilities and in the amount of GHGs and PM₁₀ emitted by facilities regulated under cap-and-trade, documented that local pollution from refineries has recently increased, and underscored the potential health benefits of direct greenhouse gas reduction regulation.³³

³⁰ AB197, Bill Analysis, Aug. 2016, available at http://www.leginfo.ca.gov/pub/15-16/bill/asm/ab_0151-0200/ab_197_cfa_20160824_113105_asm_floor.html.

³¹ *Id.*

³² ARB Letter to BAAQMD Re: Refinery Rules, April 5, 2017, attached as Attachment B.

³³ Cushing, L, Wander, M, Morello-Frosch, R, Pastor, M, Zhu, A, Sadd, J, "A Preliminary Environmental Equity Assessment of California's Cap-and-Trade Program," University of California, Berkeley, University of Southern California, San Francisco State University, Occidental College, Sept. 2016, available at http://cal.streetsblog.org/wp-content/uploads/sites/13/2016/09/Climate_Equity_Brief_CA_Cap_and_Trade_Sept2016_FINAL.pdf.

In stark contrast, the DEIR, in reliance on the Staff Report, remains largely silent and fails to describe the disproportionate and cumulative local impacts of refinery combustion emissions. Therefore, the commenters make the following recommendation:

Recommendation # 3: Revise sections of the Environmental Setting to include the Legislature's findings, publicly available data and studies detailing the existence of a disproportionate and cumulative impact of combustion pollution, in particular PM_{2.5} and ultra-fine PM emissions and exposures, surrounding Bay Area refineries.

Moreover, the DEIR's description of the Existing Regulatory Setting omits any discussion of the above State legislation recognizing the disproportionate impact of pollution from refineries.³⁴ The Air Quality Existing Regulatory Setting must be substantially revised to include an adequate assessment of the local impacts of refinery pollution on vulnerable populations and nearby communities, and in particular, on low-income communities of color that have historically faced such a disproportionate burden.

The Air Quality Existing Regulatory Setting must also include a description of the State's current regulatory framework to reduce GHG emissions, in particular AB32, SB32, AB197 and its explicit directive to directly limit pollution from high-emitting stationary sources, and any anticipated or future actions by ARB. Only then can the DEIR adequately reflect ARB's finding that Emission Caps "could help ensure that [Bay Area refineries] do not add to the state's overall emissions of greenhouse gases and criteria or toxic pollutants."³⁵

Furthermore, that discussion must also consider the cumulative impact of increased pollution on already vulnerable populations and overburdened communities. Additionally, in so doing, the current environmental setting should also include data and documented vulnerability factors for these communities from existing mapping tools, such as CalEnviroScreen version 2.0.

Therefore, the commenters make the following recommendation:

Recommendation # 4: Revise sections of the Existing Regulatory Setting to include a discussion of State climate and other relevant pollution reduction policies, and include relevant vulnerability factors to assess disadvantaged communities' cumulative exposure to pollution impacts on vulnerable populations exposed to refinery emissions regionally, and, specifically, those in communities near Bay Area refineries.

Similarly, the Air District must also discuss its own current regulatory framework and whether it results in disproportionate local impacts of air pollution that Emission Caps could prevent from worsening. For instance, several commenters on this rulemaking have mentioned a potential conflict between the federal Clean Air Act and Emission Caps. The DEIR must be revised to include those various provisions of federal, state and local measures, and assess any potential conflict with Emission Caps.

³⁴ DEIR at 3.2-14

³⁵ ARB Letter to BAAQMD Re: Refinery Rules, April 5, 2017, attached as Attachment B.

Any such assessment should expressly conclude that there is no such conflict. It is well settled that the federal Clean Air Act sets a floor for emission standards,³⁶ and air districts may set stricter standards,³⁷ even when neither federal nor state agencies have acted,³⁸ and in particular, standards tailored to prevent pollution based on local circumstances.³⁹ Therefore the commenters make the following recommendation:

Recommendation # 5: Revise sections of the Existing Regulatory Setting to include a discussion of the current regulatory framework and how that framework neither expressly nor impliedly preempts, or otherwise conflicts with, adoption and implementation of Emission Caps.

C. The Draft EIR Environmental Setting Must Include Discussion of the Trend Toward Increased Exports from Bay Area Refineries

The DEIR includes an area of potential controversy: “concerns that refinery expansion projects and trends toward increased exports have not been included for discussion.” The initial draft Staff Report had noted that, “the Air District does not have the authority to *directly* address concerns about ... the final destination of refined products.”⁴⁰ However, much like the Air District’s inability to directly regulate hazards at refineries is balanced by its ability to address such concerns through regulating resulting episodic spikes in emissions,⁴¹ the DEIR must also discuss recent increasing exports from Bay Area refineries in terms of the authority the Air District does have to regulate refinery pollution. These facts are directly relevant to and will inform any environmental and economic analysis of Rule 12-16.

Emission Caps would not significantly limit Bay Area refiners’ production, which is known because they ran at full capacity while emitting below the Emission Caps.⁴² Data also show that Bay Area refineries are producing more gasoline and diesel products than necessary to satisfy local demand, as well as an increasing trend to export such products to foreign countries.⁴³ Whether or not the Air District can directly regulate this practice that over-burdens low-income communities of color in our State, with no net benefit to the State, the Draft EIR must still discuss this increasing trend. Such a discussion is relevant to analysis of environmental impacts as well as any socio-economic analysis and must be included in the current environmental setting. Therefore, the commenters recommend the following:

Recommendation # 6: Revise sections of the Environmental Setting to disclose the increasing trend toward exporting more refined product produced at Bay Area refineries.

³⁶ Cal. Health and Safety Code § 39002

³⁷ *Id.*

³⁸ *Ultramar, Inc. v. South Coast Air Quality Management Dist.* (1993) 17 Cal.App.4th 689.

³⁹ Cal. Health and Safety Code § 40727.2(h)

⁴⁰ Draft Staff Report at 39.

⁴¹ See *supra*, BAAQMD Regulatory Concept Paper, October 2012.

⁴² District staff admit this fact; see 30 January 2017 Stationary Source Committee video archive at 2:31:00 et seq.

⁴³ See prior comments submitted by CBE on 10/21/15, 11/23/15 and 6/10/16.

Moreover, the Staff Report asserts that adoption of Emission Caps may create similar economic impacts as the temporary closure of the ExxonMobil Torrance Refinery in 2015. In making this inaccurate determination, the Staff Report relies upon utilization data for PADD 5 refineries, which provide the average refinery operation utilization for *all West Coast refineries*, not just Bay Area refineries. By contrast, an analysis of Bay Area refineries alone⁴⁴ shows the following:

Operating data confirm current capacity can be used under Rule 12-16

CO ₂ e (in megatons/yr)	Rule 12-16 limit (cap)	Annual operating data				
		2011	2012	2013	2014	2015
Chevron Richmond	4.77	4.46	3.95	3.91	4.12	4.42
Phillips 66 Rodeo	1.61	1.50	1.32	1.36	1.28	1.32
Air Liquide Rodeo	0.95	0.64	0.77	0.88	0.82	0.82
Shell Martinez	4.56	4.26	4.06	4.19	3.97	4.13
Tesoro Golden Eagle	2.61	2.40	2.09	2.45	2.33	2.06
Air Products Martinez	0.29	0.26	0.22	0.27	0.25	0.20
Martinez Cogen LLP	0.45	0.42	0.41	0.39	0.41	0.40
Valero Benicia	3.15	2.64	2.94	2.74	2.71	2.84
Bay Area crude capacity utilization		82%	86%	91%	98%	94%

Emissions data from CARB; crude capacity utilization based on data reported by the CEC and EIA.

Rule 12-16 limits pollution based on 107% of the actual maximum emissions over these past five years. As 2014 saw 98% utilization, Emission Caps would allow the full use of current capacity.⁴⁵ Particularly noteworthy, the Bay Area refineries also operated within this capacity during the Torrance Refinery outage in 2015.

Similarly, the Staff Report has prematurely determined that Rule 12-16 may have significant economic impacts in the event that either refineries choose to make improvements and increase production above current capacity, or demand for gasoline or diesel products increases in California.⁴⁶ Those determinations, however, may be properly made only following an adequate description of the environmental setting as noted above. Therefore, the commenters recommend the following:

Recommendation # 7: revise the Environmental Setting and Staff Report using CEC data for Bay Area refineries alone, instead of PADD 5 West Coast refinery data, and disclose that Bay Area refineries emitted below the Emission Caps while operating at maximum capacity; and make subsequent revisions to all sections of the DEIR and Staff Report that rely upon PADD 5 West Coast refinery data instead of Bay Area refinery data alone.

⁴⁴ Crude capacity utilization based on CEC and EIA data, as further detailed in Karras 2017.

⁴⁵ This *annual average* production rate approximately 97.7 % of maximum *calendar-day* capacity in 2014 indicates extremely high, and practically full, capacity utilization. Regardless, implementation of the 7% buffer under Emission Caps, when the highest year = 97.7% would still allow Bay Area refineries to operate at 100% utilization.

⁴⁶ Final Draft Staff Report at 29-30.

Finally, the DEIR's analysis is further flawed by assuming that Bay Area refineries would be forced to use pollution abatement techniques to comply with Emission Caps. The DEIR states, "installation of additional air pollution control equipment that *would be needed* to remain in compliance with the criteria pollutant emissions limits under Rule 12-16."⁴⁷

Notably, there is another option: compliance with Rule 12-16 may be accomplished without any change to current equipment or operations, and without incurring any new cost, based on emissions over the most recent five years reported. This is particularly the case as Bay Area refineries are operating at practically full capacity.

Therefore, the commenters recommend the following:

Recommendation # 8: Revise the DEIR to disclose the no cost, no impact option of compliance with Rule 12-16 and remove all references to and analysis of the installation of pollution control equipment as a necessary compliance option for Rule 12-16, and also, any discussion of such associated significant impacts.

II. The DEIR's "No Project" Alternative Fails to Meet CEQA's Requirements.

The CEQA Guidelines have explicitly rejected the notion that the "no project" alternative may simply reflect current conditions as assessed in an EIR's environmental setting, or even maintenance of such status quo. Rather, CEQA Guidelines § 15126.6(e) provides that a "no project" alternative must address "what would be reasonably expected to occur in the foreseeable future if the project were not approved, based on current plans and consistent with available infrastructure." The Guidelines also elaborate further on how the "no project" alternative should proceed in this specific instance:

When the project is the revision of ... a regulatory plan, policy or ongoing operation, the "no project" alternative will be the continuation of the existing plan, policy or operation into the future ... the projected impacts of the proposed plan or alternative plans would be compared to the impacts that would occur under the existing plan.⁴⁸

Therefore, a "no project" alternative must not only outline foreseeable changes to the environmental setting, but also evaluate how the Air District's current regulations, without Rule 12-16, could protect public health given those changes, particularly with regard to any disproportionate impact on low-income communities of color.

The DEIR includes Alternative 2.1, the "no project" alternative to Rule 12-16.⁴⁹ Alternative 2.1 fails to provide information necessary to determine the environmental and

⁴⁷ DEIR at 4-13 (emphasis added).

⁴⁸ CEQA Guidelines § 15126.6(e)(3)(A).

⁴⁹ DEIR at 4-5.

public health impacts with and without Emission Caps. The No Project Alternative completely ignores the preventative nature of Rule 12-16, how it could prevent increasing emissions, and particularly with regard to the resultant local impacts on disadvantaged and disparately vulnerable communities. Instead, Alternative 2.1 claims that pollution from PM, NO_x and SO₂ will continue to be addressed by “a myriad [of] Air District efforts.” The DEIR does admit: “While this collection of measures would serve to significantly reduce the emission of these pollutants, they cannot, however, guarantee that these emissions would not increase from these facilities due to production increases or modifications to operations.” This cursory analysis fails to meet the requirements of CEQA Guidelines § 15126.6(e).

The analysis, moreover, is not only cursory but also incorrect. For example, the DEIR remarks that measures in the 2017 Clean Air Plan will help in meeting the objectives of Rule 12-16, whilst the Clean Air Plan *includes* measure SS11 – emission limits on GHGs, PM, NO_x and SO₂, the same Emission Caps. In addition, while the DEIR discusses state climate policy, in particular AB32 and SB32, it simply does so in regard to how those policies can meet the same goals as Rule 12-16 – not how those policies can be advanced or complemented by Rule 12-16.⁵⁰ This analysis is backwards. Instead, in line with ARB’s recognition of how Emission Caps complement state air quality goals, the DEIR should analyze how the state may or may not meet those air pollution control goals with and without Rule 12-16.

Available information the DEIR fails to disclose or evaluate suggests Bay Area refinery combustion emissions could increase by 40–100 %, foreclosing other existing and planned measures’ ability to cut emissions as much as feasible, likely foreclosing achievement of regional climate protection targets, and resulting in 800–3,000 premature deaths over 40 years and disparately severe increase in refinery fence line communities’ mortality burden 8–12 times that regionally.⁵¹ Therefore, the commenters recommend the following:

Recommendation # 9: Revise the No Project Alternative for Rule 12-16 to include: an evaluation of the foreseeable climate and local pollution impacts that could result from the several Bay Area refinery expansion projects that enable the refining of lower quality oil feedstocks; how the Air District’s regulations and the State’s climate policies with and without Rule 12-16 can or cannot reduce such impacts; a discussion of whether the “infrastructure inertia” created by the commitment to major capital refinery investments in process changes could enable more refining of more climate-disrupting feedstocks for the foreseeable future; and an analysis of the subsequent opportunity cost of a sustainable energy future.

Finally, by determining that Alternative 2.2, implementation of Rules 11-18 and 13-1, is “preferred” over Rule 12-16, the DEIR apparently creates a false choice between Rule 12-16 and Rules 11-18 and 13-1. How Rules 12-16 and 13-1 complement one

⁵⁰ *Id.*

⁵¹ See Karras 2017.

another is detailed further below. But Rule 11-18 and Rule 12-16 are also complementary and not duplicative or mutually exclusive. Rule 11-18 targets various toxic air contaminants; it does not target, as Rule 12-16 does, GHGs and PM. Nor does Rule 11-18 prevent increasing emissions during the many years before it contemplates actual implementation of emission controls; Rule 12-16 prevents such emissions. Moreover, the large number of sources potentially affected by Rule 11-18 stands in stark contrast to the few affected by Rule 12-16. Each rule considers a significantly different range and source of pollutants. In fact, CEQA requires that an alternative “feasibly accomplish most of the basic objectives” of the proposed project.⁵² Aside from the clear public health benefits of both rules, it is hard to imagine a single basic objective common to both Rules 12-16 and 11-18. We have consistently requested Air District staff to sever environmental review of the two proposals, but at a minimum, consideration of one as a mutually exclusive alternative to the other simply does not make sense and violates CEQA. Therefore, the commenters recommend the following:

Recommendation # 10: Sever review of Rules 11-18 and 12-16 by moving the analysis of Rule 12-16 from this DEIR, and include a complete and accurate analysis of Rule 12-16 in the DEIR for Rule 13-1 in time for both Rules 12-16 and 13-1 to be considered for adoption by the Board of Directors in September 2017.

III. The DEIR Fails to Adequately Discuss the Environmentally Superior Alternative

The DEIR states that Alternative 2.2, implementation of Rules 11-18 and 13-1, is the environmentally superior alternative to implementation of Rule 12-16.⁵³ The DEIR arrives at this faulty conclusion by committing three errors: first, as noted above, the DEIR incorrectly assumes several significant impacts of implementation of Rule 12-16; second, the DEIR incorrectly or prematurely assumes that Rule 12-16 and Rule 13-1 offer the same degree of protection; and third, incorrectly assumes that these complementary measures are alternatives, as discussed below.

The DEIR inappropriately identifies several significant impacts resulting from the construction of pollution abatement equipment. This analysis, however, is predicated on the incorrect assumption that Bay Area refiners *must* install such equipment in order to comply with Emission Caps. As noted, this flawed analysis ignores the viable option for refiners to comply by not changing any operations – a no cost and no impact option. Therefore, the commenters make the following recommendation:

Recommendation # 11: (in conjunction with Recommendation # 8) Revise the DEIR’s findings of significant impacts that arise from the construction and operation of pollution abatement equipment to comply with Rule 12-16 (in all areas, Air Quality, GHGs, Hazards and Hazardous Materials, Hydrology, Water Quality, and Utilities,) and revise each subsequent section of the DEIR that had relied on those misidentified significant impacts, including consideration and comparison of Alternatives.

⁵² CEQA Guidelines § 15126.6(c).

⁵³ DEIR at 4-16.

Furthermore, Rule 13-1 is still in development and it is premature to make findings in this DEIR regarding how effective implementation of any rule in conjunction with Rule 13-1 may prove. As currently drafted, the measure exempts refinery combustion emissions of particulate matter, nitrogen oxides, and sulfur dioxide from direct control and could potentially allow facility-wide refinery emissions of greenhouse gases to increase. Recently, community groups submitted comments on *draft* Rule 13-1, supporting its goal, but also requesting a revised version that could better meet the Rule's objectives. Those are the same objectives that the DEIR determines Rule 13-1 already meets.⁵⁴ Therefore, the commenters make the following recommendation:

Recommendation # 12: Remove all analysis and comparison with draft Rule 13-1, or, specify that Rule 13-1 is still in draft form and requires further development in order to meet its objectives.

Finally, Rule 12-16 caps emissions per year, and draft Rule 13-1 seeks to cap emissions per barrel of oil refined. The per-year caps prevent increased emissions at current or increased production, and (if revised and corrected) the per-barrel caps prevent excess emissions by ensuring emissions decline when fewer barrels of oil are refined. Thus, in concept, Rule 12-16 and Rule 13-1 can work together to protect public health and the climate better than either rule could alone. Moreover, although the DEIR does not disclose any of this information, ARB has stated that both Rules 12-16 and 13-1 could “ensure that [Bay Area refineries] do not add to the state’s overall emissions of greenhouse gases and criteria or toxic pollutants.”⁵⁵ It is therefore wholly possible that implementation of Rules 12-16 and 13-1 together is an environmentally superior alternative to implementation of any of the rules alone. As noted in our comments on draft Rule 13-1, this draft measure, with revisions that in any case are essential for it to meet its objectives, is complementary to Rule 12-16.⁵⁶ Therefore, the commenters make the following recommendation:

Recommendation # 13: (in conjunction with Recommendation # 12) Remove the analysis of 12-16 from this DEIR, and include a complete and accurate analysis of Rule 12-16 in the DEIR for Rule 13-1, including consideration of implementation of Rule 12-16 and Rule 13-1 together as the environmentally superior alternative, to be considered for adoption by the Board of Directors in September 2017.

IV. The DEIR’s Project Description is Inadequate

Although the DEIR describes the objectives of Rule 12-16, its description of the Rule lacks any adequate discussion or description of how Rule 12-16 may meet those stated project objectives. What analysis the DEIR does provide rests solely on potential pollution abatement equipment construction and installation. Moreover, the DEIR’s analysis of impacts from add-on controls to meet pollution control limits, which the

⁵⁴ *Id.* at 4-16, 4-17.

⁵⁵ See ARB Letter to BAAQMD Re: Refinery Rules, April 5, 2017.

⁵⁶ See Communities Comment on Rule 13-1, April 21, 2017, attached as Attachment C.

DEIR asserts shall be met without Rule 12-16, evidently assumes increasing refinery emissions as a given. Ignoring increasing refinery emissions in all other contexts of the DEIR renders the project description unstable.

A. The DEIR Fails to Describe the Complementary Nature of Rule 12-16

By failing to adequately depict the existing environmental and regulatory setting, the DEIR is foreclosed from describing how Rule 12-16 may complement other pollution reduction measures, including meeting the state's greenhouse gas reduction goals. ARB has stated that Rule 12-16 could assist in meeting the state's overall pollution reduction targets. Similarly, as there are no meaningful facility-wide limits on Bay Area refinery pollution, the various Air District regulations requiring pollution reduction at refineries will meet their objectives⁵⁷ only in conjunction with what Rule 12-16 provides: preventing emissions from increasing. Indeed, Rule 12-16 is included in the Air District's 2017 Clean Air Plan, the blueprint for how those emission reductions may be realized. Therefore, the commenters make the following recommendation:

Recommendation # 14: Revise sections of the Project Description to detail how Emission Caps, or a refinery-wide emission limit on GHGs, PM, NO_x and SO₂, may complement the Air District's and the state's current and foreseeable air pollution reduction measures at Bay Area refineries.

Similarly, the Air District's recent EIR for its 2017 Clean Air Plan notes that Rule 12-16 (measure SS11 in the Clean Air Plan) does not have the potential to result in "leakage."⁵⁸ Leakage is "a reduction in emissions of greenhouse gases within the state that is offset by an increase in emissions of greenhouse gases outside the state."⁵⁹ Designed to prevent refinery emissions from increasing, Emission Caps set emission limits at levels that each Bay Area refinery already meets. As the Air District has previously stated that leakage is a concern for Rule 12-16, the DEIR must be corrected to explicitly dispel that incorrect notion. Therefore, the commenters recommend the following:

Recommendation # 15: Revise sections of the Project Description to clarify that implementation of Rule 12-16 will not result in leakage and otherwise complements the state's greenhouse gas reduction goals.

B. The DEIR Fails to Disclose that Compliance with Rule 12-16 Includes a No Cost and No Impact Option

The DEIR states:

⁵⁷ See Resolution 2014-07; Attachment KR-4 to Karras, 2017 cited above (directing development of Rule 12-16 with other already-adopted refinery measures and including a goal for "as much emissions reductions as are feasible").

⁵⁸ 2017 Clean Air Plan EIR at 3.3-24.

⁵⁹ Cal. Health and Safety Code § 38505(j).

Given that the emission limits [Emission Caps] are consistent with the current production capacity ... affected facility operators may not be required to install control equipment if crude oil throughput and, therefore, fuel consumption do not substantially increase.

Yet, the DEIR also suggests that “to remain in compliance with draft Rule 12-16 the most likely means of reducing ... emissions would be to further control emissions sources.”⁶⁰ The DEIR consequently analyzes and associates significant impacts of construction and installation of pollution abatement technologies with implementation of Rule 12-16.

This error is, however, again predicated on the DEIR’s reliance on the Staff Report’s depiction of operational utilization of *all* West Coast refineries, and not only Bay Area refineries. Based on this faulty and overbroad range of data, the DEIR’s analysis is incorrectly based on the assumption that Bay Area refineries are operating between 89.6 to 92.8 percent annual average utilization.⁶¹ As noted above, had the DEIR used data for *only* Bay Area refineries, it would not have arrived at this conclusion as Bay Area refineries are currently operating at maximum capacity.

Moreover, the DEIR again ignores the no cost/no impact option of compliance where Bay Area refiners simply do not have to change operations based on 2010-2015 operations. Therefore, the commenters make the following recommendation.

Recommendation # 16: (in conjunction with Recommendation # 8) Revise sections of the Project Description to detail the no cost and no impact option of compliance with Rule 12-16.

C. DEIR Fails to Describe the Preventative Nature of Rule 12-16

The DEIR’s Project Description describes the pollutants that Emission Caps would control,⁶² but nowhere does it describe how these pollutants could foreseeably increase in the absence of Rule 12-16. For instance, in its discussion of GHG pollutant coverage, the DEIR fails to mention the correlation between increased GHG emissions and foreseeably increasingly dense oil feeds at Bay Area refineries. Nor does the DEIR disclose the increase in co-pollutant PM and PM precursor emissions that could result from greater use of combustion processes and subsequent increased combustion emissions, or likely increases in the frequency and magnitude of episodic emissions associated with refining lower quality oil.

Consequently, the Project Description fails to make clear the preventative nature of Emission Caps: to prevent these foreseeable emissions impacts, and in particular, impacts on vulnerable populations regionally, and in low-income communities of color in close proximity to refineries. Such a discussion must also identify how implementation

⁶⁰ *Id.*

⁶¹ Final Draft Staff Report at 31.

⁶² DEIR at 2-10 through 2-11.

of Rule 12-16 could meet its project objective, specifically, by setting emission limits that effectively limit a switch to lower quality oil feeds, and discouraging investment in new refinery equipment that would allow for even greater refining of lower quality oils and lead to increased emissions of GHG, PM, NO_x, or SO_x from Bay Area refineries.⁶³

Furthermore, the accompanying expert reports demonstrate that the potential emissions and associated health impacts and hazards Emission Caps could prevent can be estimated based on readily available information. As discussed at the outset of this comment, these reports estimate that Rule 12-16 could prevent refinery combustion emissions from increasing by 40–100%, and thereby avert 800–3,000 premature deaths from that pollution in the Bay Area over 40 years. Equally important, these reports estimate that preventing that oil quality-driven refinery emissions increase could avert a disparately severe mortality burden, 8–12 times the region wide burden from that emissions increase, in communities within 2.5 miles of refineries. The DEIR fails to include this crucial information.

Recommendation # 17: Revise sections of the Project Description to illustrate how Emission Caps can prevent locking in increased combustion emissions of GHGs, PM, NO_x and SO₂, and provide an estimate of those emissions and resultant health risks and impacts that Emission Caps would prevent.

V. The DEIR Fails to Adequately Analyze Economic Impacts

The DEIR fails to adequately analyze the economic impacts of implementation of Rule 12-16 in two distinct respects: first, it wrongly assumes Rule 12-16 would restrict current production capacity; and second, it incorrectly associates significant impacts of the construction and installation of pollution control equipment with implementation of Emission Caps, it incorporates a flawed, and unnecessary socio-economic analysis. While we recognize that CEQA does not require analysis of purely economic impacts, including an inaccurate assessment of economic impacts in the DEIR undermines CEQA's purposes, including by depriving decision-makers of the ability to balance any significant and unavoidable impacts of the project against its potentially overriding benefits.⁶⁴

As noted above, Rule 12-16 would allow Bay Area refineries to operate at maximum current capacity. Emission Caps therefore could discourage any expansion of refinery operations, but would in no way affect current utilization. Moreover, there would be no need for any such expansion. In addition to the reasons noted above, the DEIR notes:

⁶³ DEIR at 2-4; see also our prior comments illustrating the problem of “infrastructure inertia,” Legal Analysis of the Bay Area Air Quality Management District’s Authority to Adopt Emission Caps in Proposed Rule 12-16, July 14, 2016, attached as Attachment D. —

⁶⁴ See Pub. Res. Code 21081(a)(3).

Presuming continuing increases in gasoline consumption results in unreasonable levels of speculation. For example, it is impossible for the Air District to predict the exact level of gasoline consumption in 2018 ...⁶⁵

This confirms that the DEIR's assumption such expansions are foreseeable itself rests on unwarranted speculation. Despite this inclusion in the DEIR, the accompanying Staff Report includes an economic analysis that is wholly dependent on such speculation that "demand for refined fuels continues to increase."⁶⁶ At the same time, the Staff Report acknowledges that "CARB projects that gasoline consumption will *decrease* over time due to stricter fuel consumption standards and other factors."⁶⁷ These contradictory statements in the DEIR and Staff Report present decision-makers and the public with confusing and inconsistent information. Therefore, the commenters provide the following recommendation:

Recommendation # 18: Revise sections of the Staff Report to remove any suggestion that gasoline demand or consumption in California will increase, and revise any sections of the Staff Report that mistakenly rely upon that speculative assumption.

Similarly, the DEIR's reliance on West Coast refinery utilization data (PADD 5) instead of only Bay Area refinery data, also plagues the Staff Report's economic and socio-economic analysis. In particular, Bay Area-specific refinery data show that in 2015 Bay Area refiners supplied the increased demand that resulted during the major gasoline-production shut-down at the southern California refinery in Torrance – and did so while still operating within capacity, at a Bay Area average crude capacity utilization of approximately 94 % - as would be the case with Emission Caps. Therefore, the commenters provide the following recommendation:

Recommendation # 19: Revise sections of the Staff Report to remove any suggestion that Emission Caps would cause similar gasoline price increases as occurred during the temporary shut-down of the southern California refinery in Torrance in 2015.

In addition, as compliance with Rule 12-16 may be accomplished by Bay Area refiners at no cost and with no environmental impact, inclusion of a socio-economic analysis related to Emission Caps is even unnecessary. The Staff Report's socioeconomic analysis is primarily concerned with the impacts of the option of compliance with Emission Caps by installing pollution control technology, which is not necessary to comply with the Rule. Moreover, pursuant to the CEQA Guidelines, evidence of social or economic impacts which do not contribute to or are not caused by physical impacts on the environment is not "substantial evidence" that would show those impacts to be significant.⁶⁸

⁶⁵ DEIR at 3.3-25.

⁶⁶ Final Staff Report at 32.

⁶⁷ *Id.*

⁶⁸ See CEQA Guidelines § 15131 and Public Resources Code § 21082.2(c).

As it is possible to comply with Rule 12-16 by maintaining current operations and at no cost and without any environmental impact, neither the DEIR nor the Staff Report should rely on speculative assertions that socioeconomic costs will be high, or will even occur at all. Therefore, the commenters make the following recommendation:

Recommendation # 20: revise sections of the Staff Report to correct the socioeconomic analysis and clarify the no cost and no impact compliance option for implementation of Rule 12-16.

VI. The DEIR Also Commits Procedural Violations of CEQA

A. The DEIR Fails to Include Comments on the NOP/IS Detailing and Documenting the Above Concerns

The DEIR's Appendix A should have included all comments received by the Air District regarding the Notice of Preparation and the Initial Study for the DEIR. However, Appendix A fails to include:

Ostro, B.; Kyle, A.D.; Broome, C.V.; Rudolph, L.; Heller, J.; Brunner, W.; Dervin, K.; Kirsch, J.I. and Kuiper, H., 2016. *Health and Safety Commentary Pertaining to Rule 12-16 and 11-18*; comment letter signed by nine public health and medical professionals and experts in support of Rule 12-16. Submitted to the Air District as a comment regarding the scope of the Draft Environmental Impact Report for proposed Regulation 12, Rule 16. December 2, 2016 ("Health Experts' December 2016 Comment on the DEIR Scope").

Karras, 2016. *Combustion Emissions from Refining Lower Quality Oil Part 2: How Much Could a Switch to 'Tar Sands' Oil Increase Direct Emissions of PM_{2.5} and CO₂ from Northern California Oil Refineries?*; submitted to the Air District as a comment regarding the scope of the DEIR for proposed Regulation 12, Rule 16. December 2, 2016. ("CBE December 2016 Technical Report on the DEIR Scope").

Comments on the Scope and Content of the Notice of Preparation and Initial Study for Regulation 12: Miscellaneous Standards of Performance, Rule 16: Petroleum Refining Facility-Wide Emissions Limits (Rule 12-16); comments provided to the Air District by 350 Bay Area, Center for Biological Diversity, Communities for a Better Environment, Natural Resources Defense Council, and Sierra Club. December 2, 2016 ("December 2016 Legal Comment of 350 Bay Area, CBD, CBE, NRDC, and Sierra Club on the DEIR Scope").

These comments identified shortcomings that have been carried forward into the DEIR, particularly, its failure to adequately describe the existing environmental setting, the no project alternative, and the increased disproportionate impact of pollution on low-income communities of color that Emission Caps would prevent. Therefore, the commenters make the following recommendation:

Recommendation # 21: Revise Appendix A of the DEIR to include the “Health Experts’ December 2016 Comment on the DEIR Scope,” “CBE December 2016 Technical Report on the DEIR Scope,” and “December 2016 Legal Comment of 350 Bay Area, CBD, CBE, NRDC, and Sierra Club on the DEIR Scope.”

B. The DEIR Prejudices Consideration of Rule 12-16 by Mislabeling it “CBE’s” Proposal

In 2012, the regulatory concept paper for this rulemaking found that a switch to lower quality grades of oil could increase refinery emissions significantly.⁶⁹ This demonstrated the need for a “backstop” to prevent increasing refinery emissions.⁷⁰ In 2014, the Air District resolved to develop Rule 12-16 for this purpose.⁷¹

The DEIR fails to disclose these facts regarding the Air District’s role in the development of Rule 12-16, and instead states that Rule 12-16 reflects a “policy recommendation from CBE and their associated organizations,”⁷² thereafter repeatedly referencing this Air District-proposed action as only recommended by “CBE.” This error presents an incomplete, inaccurate, and biased description of Rule 12-16 that prejudices consideration of the need for Emission Caps, which the DEIR as noted above, fails to adequately discuss. The commenters therefore make the following recommendation:

Recommendation # 22: Revise all sections of the DEIR and Staff Report that refer to Rule 12-16 as merely “CBE and their associated organizations” or “CBE’s” proposal and disclose the Air District’s role in the development of Rule 12-16.

VII. CONCLUSION

For the foregoing reasons, the DEIR is inadequate under CEQA. We respectfully request the Air District Board to direct Staff to revise the DEIR in accordance with the above recommendations, and, to do so in time for consideration of Emission Caps and Rule 13-1 for adoption this September. Doing so would not only bring the DEIR into compliance with CEQA, but would also address the concerns of Air District Staff that this rulemaking may be arbitrary and capricious.⁷³

⁶⁹ Petroleum Refining Emissions Tracking, Regulatory Concept Paper, available at http://www.baaqmd.gov/~media/files/planning-and-research/rules-and-regs/workshops/2013/1215_dr_rpt032113.pdf?la=en.

⁷⁰ *Id.*

⁷¹ Air District Resolution 2014-07, adopted October 15, 2014.

⁷² DEIR at 2-1

⁷³ See Final Draft Staff Report at 37-38.

Respectfully Submitted,

Roger Lin
Staff Attorney, Communities for a Better Environment

Kevin Bundy
Senior Attorney and Climate Legal Director, Center for Biological Diversity

Devorah Ancel
Staff Attorney, Sierra Club

Laurence G. Chaset
Attorney at Law, Sustainable Energy Futures on behalf of 350 Bay Area
Stanford Law School Environmental Law Pro Bono Project

Comment also supported by:

Miya Yoshitani
Asian Pacific Environmental Network

Denny Larson
Community Science Institute

Katherine Black
Benicians for a Safe and Healthy Community

Bradley Angel
Greenaction for Health and Environmental Justice

Nancy Rieser
Crockett-Rodeo United to Defend the Environment

Steve Nadel and Shoshana Wechsler
Sunflower Alliance

Janet Johnson
Richmond Progressive Alliance

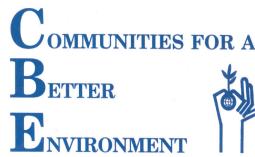
Jan Warren
Interfaith Climate Action Network of Contra Costa County

Bob Harlow
Mill Valley Community Action Network

Janet Pygeorge
Rodeo Citizens Association

Luis Amezcua
Sierra Club Bay Chapter

ATTACHMENT A



Bay Area Air Quality Management District
375 Beale Street, Suite 600
San Francisco CA 94105

VIA EMAIL
vdouglas@baaqmd.gov
Victor Douglas

December 2, 2016

RE: Comments on the Scope and Content of the Notice of Preparation and Initial Study for Regulation 12: Miscellaneous Standards of Performance, Rule 16: Petroleum Refining Facility-Wide Emissions Limits (Rule 12-16)

Dear Mr. Douglas,

The Notice of Preparation and Initial Study for Rule 12-16¹ ("NOP/IS") suffer from significant defects and omissions in violation of the California Environmental Quality Act ("CEQA"). In particular, the NOP/IS omit critical discussion of recently permitted or reasonably foreseeable Bay Area refinery expansion projects that provide those refineries with the ability to process more polluting and climate disrupting oil feedstock. As such, the NOP/IS fail to adequately capture the existing environmental setting, tainting any evaluation of Rule 12-16. The NOP/IS reach several faulty conclusions, particularly regarding how adoption of Rule 12-16 (hereafter also referenced as "Emission Caps") might complement or conflict with the Bay Area Air Quality Management District's ("Air District") existing regulations and the State's climate policies, in particular, AB197.

At the November 16 meeting of the Air District Board of Directors, the Board of Directors provided specific direction to staff to include all relevant factual information for the determination of whether any such conflicts exist, within the Draft Environmental Impact Report

¹ Including the accompanying October 2016 Draft Staff Report ("Staff Report") which discusses several issues required for inclusion in the Draft Environmental Impact Report, as detailed throughout this comment.

for Rule 12-16 (“Draft EIR”). Adhering to the Board’s direction may remedy any similar defects in the Draft EIR as detailed further below.

I. The Draft EIR Must Include Discussion of Potential Conflicts with State and Regional Plans and Policies

CEQA Guidelines §15125(d) provides that an EIR *shall* discuss any inconsistencies between the proposed project and applicable general plans and regional plans. The Guidelines specifically state that such regional plans include “the applicable air quality attainment or maintenance plan or State Implementation Plan.” We emphasize that the Draft EIR must include such a discussion which, following Board direction, requires disclosure and analysis of the following.

(i) Consistency with the Clean Air Act

The Air District is designated nonattainment for the 2006 PM_{2.5} National Ambient Air Quality Standards (“NAAQS”). Recently, in August 2016, the Environmental Protection Agency (“EPA”) issued a final rule providing a limited approval and limited disapproval of revisions to Air District Regulation 2, Rules 1 and 2 (“2-1” and “2-2”).² The EPA concluded that Air District Rules 2-1 and 2-2 would become the federally enforceable New Source Review (“NSR”) program in the SIP for the Air District, subject to the Air District’s obligation to correct the rule deficiencies listed in the Federal Register.³ Notably, the EPA found that the Air District’s NSR regulations did not meet federal standards: “emission reductions intended to be used as offsets for new major sources or major modifications are only creditable if they are reductions of actual emissions, not reductions in the [potential to emit] of a source.”⁴ The federal provisions at issue include Clean Air Act §§ 173(a) and (c), the same provisions that the Staff Report suggests conflict with adoption of Rule 12-16.

Pursuant to the CEQA Guidelines, the Draft EIR must discuss any potential conflict. The Staff Report claims that there is a “significant argument” that Emission Caps would conflict with these federal provisions, but does not support that assertion with any facts or data.⁵

At a minimum, the Draft EIR must disclose relevant facts necessary for the Board and public to determine whether any such conflict exists. Such data must include: the amount of pollutant offsets, for PM₁₀, PM_{2.5}, SO_x and NO_x, that the Air District has allowed historically and foreseeably could allow in the future; whether any such offsets were granted subject to Rules 2-1 and 2-2 when those rules were applied less stringently than federal standards; and if so, whether Emission Caps may actually complement, rather than conflict with, achievement of the NAAQS. This discussion must also include a similar analysis of outstanding offsets held by refiners for previously permitted new or modified sources. Part II of this comment also details other relevant factual information required to make such an adequate determination regarding this alleged conflict.

² Federal EPA docket number EPA-R09-OAR-2015-0280, available at <https://www.regulations.gov/document?D=EPA-R09-OAR-2015-0280-0020>

³ *Id.*

⁴ *Id.*

⁵ Staff Report at 17.

(ii) Consistency with the State's Climate Policies

We are pleased that during the November 14 Scoping meeting, Air District staff clarified that the Draft EIR would discuss and evaluate any potential conflicts between Emission Caps and the State's Climate policies. Those policies include: AB32 and its successor legislation SB32 and AB197.

California's recent adoption of SB32 codifies ambitious climate change goals requiring the state to reduce greenhouse gas emissions to 40% below 1990 levels by 2030.⁶ The passage of SB32 (and its ambitious greenhouse gas reduction targets) was contingent on the enactment of companion legislation — AB 197.⁷ AB197 was introduced to provide greater legislative oversight in developing and adopting methodologies to reduce climate change pollution. This is significant because AB197 calls for specific measures that make the Air District's⁸ promulgation of refinery greenhouse gas caps an essential component to achieving the state's more aggressive climate change pollution targets.

Importantly, SB32 paired with AB197 calls for a marked change in how California will achieve its more ambitious climate change pollution reduction goals. SB32 and AB197 require that the state "achieve the more stringent GHG emission reductions in a manner that benefits the state's most disadvantaged communities and is transparent and accountable to the public and the Legislature."⁹ AB197 requires regulators to consider and address climate change and related pollution impacts on California's disadvantaged communities by considering the social costs of greenhouse gas emissions and implementing equitable solutions to mitigate the problem.¹⁰ For example, while some regions of the state can afford to put more Teslas on the road, other regions that are disproportionately burdened by greenhouse gas and toxic polluting industries cannot. AB197 addresses this problem head-on by requiring regulators to prioritize the implementation of regulations that result in direct emissions reduction at large stationary sources in order to protect the state's most impacted and disadvantaged communities.¹¹ In other words, the Legislature expressly conditioned passage of SB32 on adoption of companion legislation—AB 197—that favors "command-and-control" regulation over market-based and incentive programs for large stationary sources like refineries when necessary to cause actual emission reductions in disadvantaged communities.¹² The bill's analysis even acknowledges that direct regulation is necessary in such communities and must be prioritized to achieve statewide limits while mechanisms such as cap-and-trade may operate as backstops to achieve excess reductions.¹³

The Staff Report conveys concerns that a greenhouse gas emission cap on refineries would conflict with California's greenhouse gas cap-and-trade and the Air District's own criteria

⁶ Senate Bill No. 32: Global Warming Solutions Act of 2006: emissions limit (extends AB 32 and sets 2030 greenhouse gas emissions targets), available at https://leginfo.ca.gov/faces/billNavClient.xhtml?bill_id=201520160SB32.

⁷ SB32 specifies that "it shall become operative only if AB 197 is enacted..."

⁸ Air districts have primary authority over regulation of stationary source air pollution.

⁹ SB 32 Sec. 1 (d); *see also* AB 197 Sec. 1 (c), (e).

¹⁰ AB 197 Sec. 5.

¹¹ *Id.*

¹² AB 197, Bill Analysis, Aug. 2016, available at http://www.leginfo.ca.gov/pub/15-16/bill/asm/ab_0151-0200/ab_197_cfa_20160824_113105_asm_floor.html.

¹³ *Id.*

pollutant trading program. The report lacks any justification for this assertion. Also, the Staff Report states that the Board may not be able to justify the necessity of a greenhouse gas cap approach because other jurisdictions have not adopted one.¹⁴ However, the Air District need not look to other jurisdictions for the authority to regulate greenhouse gas or other pollutant emissions.

The Staff Report also asserts that it would be difficult for the Air District to explain the benefit of capping greenhouse gas emissions because they are not localized health concerns.¹⁵ However, data exists to the contrary. As one example, a recent University of Southern California study documents that local pollution from refineries has recently increased and underscores the potential health benefits of direct greenhouse gas reduction regulation.¹⁶ The Staff's argument about localized health concerns is indeed a red herring. The momentum behind AB197's passage precisely counters this argument. AB197 explicitly acknowledges the need to consider the social, health and economic costs on disadvantaged communities as the basis for compelling direct regulation of greenhouse gas and local pollution specifically within the refinery sector.

The Staff Report is simply devoid of any discussion of the new regulatory landscape within which ARB and the Air District will be operating. It fails to mention SB32, AB197, its emphasis on equitable climate change solutions that protect California's disadvantaged communities, and its prioritization of direct emission reduction controls on the largest greenhouse gas polluting sources, in particular, the refinery sector.

Notwithstanding the Staff Report's omissions, the underlying purpose of AB197, that the state's climate change programs are not shared equally by all Californians, places an especially heavy burden on the Air District to address this problem. This is particularly true given that almost a third of the state's oil refineries are located in the Bay Area, and that the health and safety of Bay Area communities have long suffered disproportionately from the region's refinery pollution problems. Unfortunately, absent direct regulation of the refinery sector, the greenhouse gas and local pollution problems from refineries are only expected to worsen with the anticipated importation of more carbon intensive, low quality crudes such as Canadian tar sands.¹⁷

While ARB has primary authority over regulation of mobile sources of pollution, under the Federal Clean Air Act and state law, California's Air Districts have primary regulatory authority over stationary sources of air pollution.¹⁸ Indeed, the enactment of SB32 and AB197 does not change this. Additionally, the courts have long affirmed air district authority to regulate

¹⁴ *Id.* at 17.

¹⁵ *Id.* at 20.

¹⁶ Cushing, L, Wander, M, Morello-Frosch, R, Pastor, M, Zhu, A, Sadd, J, "A Preliminary Environmental Equity Assessment of California's Cap-and-Trade Program," University of California, Berkeley, University of Southern California, San Francisco State University, Occidental College, Sept. 2016, available at http://cal.streetsblog.org/wp-content/uploads/sites/13/2016/09/Climate_Equity_Brief_CA_Cap_and_Trade_Sept2016_FINAL.pdf.

¹⁷ "Next Frontier for Dangerous Tar Sands Cargo: California," Natural Resources Defense Council, Issue Brief, April 2015, at 2, available at <https://www.nrdc.org/sites/default/files/west-coast-tar-sands-threat-ca-FS.pdf> (tar sands process at California refineries could grow from 50,000 bpd to 650,000 bpd by 2040).

¹⁸ *Ultramar, Inc. v. South Coast Air Quality Management Dist.* (1993) 17 Cal.App.4th 689, 708, citing *Western Oil & Gas Assn. v. Monterey Bay Unified Air Pollution Control Dist.* (1989) 49 Cal. 3d 408; *Orange County Air Pollution Control Dist. v. Public Util. Comm.* (1971) 4 Cal.3d 945, 948 (emphasis in original); Cal. Health and Safety Code § 40000.

air pollutants from large industrial stationary sources more stringently than the state and/or federal government, even pollutants not regulated by the state.¹⁹

CEQA requires the Draft EIR to evaluate Rule 12-16 in the context of SB32 and AB197, including how it complements these state policies and any potential inconsistencies. ARB will soon complete its Scoping Plan for implementation of SB32 targets, followed by promulgation of regulations to achieve those targets. As such, ARB's plan may be extremely relevant to the Draft EIR discussion. Moreover, that discussion must also include relevant factual information as discussed in the next section of this comment.

II. The Draft EIR Must Include Factual Information Relevant to Determine Potential Legal Conflicts

The following defects in the NOP/IS prejudice any adequate evaluation of Rule 12-16, particularly with regard to the potential conflicts noted above. Adherence to Board direction, and the CEQA Guidelines as noted below, could remedy these defects in the Draft EIR.

(i) The Draft EIR Must Include an Adequate Description of the Environmental Setting

CEQA Guidelines § 15125(c) provides that “[k]nowledge of the regional setting is critical to the assessment of environmental impacts [and] [s]pecial emphasis should be placed on environmental resources that are rare or unique to the region.” The courts have affirmed this principle, holding that the absence of accurate and complete information regarding the project setting precludes the adequate investigation and discussion of the environmental impacts of the project.²⁰ The NOP/IS fail to outline the environmental setting in three significant respects: a current regional crude shift to a lower quality, and more polluting, oil feedstock; the disproportionate impact of such increased pollution on local low-income communities of color; and finally, how that impact is emphasized by the contrast of growing foreign exports of fuel and decreasing domestic consumption.

(a) The Draft EIR Must Include Recent and Proposed Bay Area Refinery Expansion Projects in its Discussion of the Environmental Setting

First, since at least 2012, the Air District has acknowledged the influx of lower quality oils into the Bay Area and admitted the occurrence of “increased emissions of air contaminants” and emission increases as a result of “accidents related to the increased corrosiveness of lower quality crudes.”²¹ The Air District has since permitted at least three refinery expansion projects that enable those refineries to process and refine lower quality crude oil feedstocks.²² Other

¹⁹ *Western Oil & Gas Assn. v. Monterey Bay Unified Air Pollution Control Dist.* (1989) 49 Cal. 3d 408, 418; *Ultramar, Inc. v. South Coast Air Quality Management Dist.* (1993) 17 Cal.App.4th 689, 707.

²⁰ *San Joaquin Raptor/Wildlife Rescue Center v. County of Stanislaus* (1994) 27 Cal. App. 4th 713.

²¹ BAAQMD Regulatory Concept Paper, Petroleum Refining Emissions Tracking Rule, Draft, October 15, 2012, citing The U.S. Oil Refining Industry: Background in Changing Markets and Fuel Policies” (Nov. 22, 2010), available at http://www.baaqmd.gov/~media/files/planning-and-research/rules-and-regs/workshops/2013/1215_dr_rpt032113.pdf?la=en.

²² In 2013, the Air District permitted the Kinder Morgan Richmond Terminal Crude by Rail Project; in 2014, the Chevron Richmond Refinery Modernization Project; in 2015, the Phillips 66 Rodeo Refinery Propane Recovery Project.

similar expansion projects in the Bay Area are currently proposed, such as the Nustar Shore Terminals LLC Selby Terminal Crude Oil Project.

Ample evidence²³ illustrates that these expansion projects allow each respective refinery to have the flexibility to refine a broader range of crude oil feedstocks. These are the very “update[s]” or “modif[ications]” the Staff Report notes are required to process “crude oil from different sources.”²⁴ Those new and different sources include a greater quantity of cost-advantaged and extreme polluting and climate disrupting feedstocks, such as tar sands diluted bitumen.

Nevertheless, the NOP/IS diminish the impact of these refinery expansion projects throughout the Bay Area, making only brief and cursory references. To the contrary, pursuant to CEQA Guidelines § 15125(c), the Draft EIR description of the environmental setting must disclose each permitted, proposed, and foreseeable refinery infrastructure expansion—or “update”—and whether, and if so by how much, each expansion may allow the respective refinery to process a greater quantity of more climate disrupting and polluting crude oil feedstock.

(b) The Draft EIR Environmental Setting Must Include an Assessment of the Local and Disproportionate Impact of Refinery Pollution

As noted in the November 11, 2016 comment on the NOP/IS submitted by CBE and other organizations, there is abundant evidence that refinery emissions disproportionately impact nearby low-income communities of color. We have illustrated several examples, including elevated indoor PM_{2.5} exposures in the homes of low-income residents of color in Richmond, increased exposure to ultra-fine PM from refinery sources, and elevated concentrations of emissions during episodic emissions from incidents such as the August 2012 Chevron Richmond Refinery fire.

The NOP/IS, however, suggests that there is no such local impact of refinery pollution. The Staff Report even suggests that PM_{2.5} exposure is a regional, not a local, problem. The Staff Report arrives at its faulty conclusion by relying upon only regional, or ambient, air quality data. Indeed, the air monitors that account for such measurements are located in San Pablo, Concord, Vallejo, San Rafael, San Jose, East Oakland, Livermore, San Francisco, Napa and Gilroy—none of which are home to a Bay Area refinery. The Draft EIR must instead include an adequate assessment of the local impact of refinery pollution, and in particular, on low-income communities of color that have historically faced such a disproportionate burden.

In assessing this local impact, it is also imperative to consider the cumulative impact of increased pollution on these already overburdened communities. Additionally, in so doing, the current environmental setting should also include data and documented vulnerability factors for these communities from existing mapping tools, such as CalEnviroScreen version 2.0.

²³ See prior comments submitted by CBE on 10/21/15, 11/23/15 and 6/10/16.

²⁴ Staff Report at 8.

(c) The Draft EIR Environmental Setting Must Include Discussion of the Trend Toward Increased Exports from Bay Area Refineries

The NOP/IS states that “the Air District does not have the authority to *directly* address concerns about ... the final destination of refined products.”²⁵ However, much like the Air District’s inability to directly regulate hazards at refineries balanced by its ability to address such concerns through regulating resulting episodic spikes in emissions,²⁶ the Draft EIR must also discuss recent increasing exports from Bay Area refineries. These facts are directly relevant to and will inform any environmental and economic analysis of Rule 12-16.

As noted in our prior comments, adoption of Emission Caps would not significantly limit Bay Area refiners’ production, which is currently at approximately 97.7% of capacity. Data also show that Bay Area refineries are producing more gasoline and diesel products than necessary to satisfy local demand, as well as an increasing trend to export such products to foreign countries.²⁷ Whether or not the Air District can directly regulate this practice that over-burdens low-income communities of color in our State, with no net benefit to the State, the Draft EIR must still discuss this increasing trend. Such a discussion is relevant to analysis of environmental impacts as well as any socio-economic analysis and must be included in the current environmental setting.

Moreover, the Staff Report asserts that adoption of Emission Caps may create similar economic impacts as the temporary closure of the ExxonMobil Torrance Refinery in 2015. The Staff Report does so without detailing any supporting data; instead, the Draft EIR must address the current production capacities of the Bay Area refineries in the environmental setting, the destination of those products, and whether such an assertion of similar economic impact is even plausible in the context of Rule 12-16. This disclosure is necessary to dispel any superficial arguments of “leakage,” and for an evaluation of any perceived conflicts between Emission Caps and cap-and-trade and other related provisions of AB 32.

Similarly, the Staff Report has prematurely determined that Rule 12-16 may have significant economic impacts in the event that either refineries choose to make improvements and increase production above current capacity, or demand for gasoline or diesel products increases in California.²⁸ Those determinations, however, may be properly made only following an adequate description of the environmental setting as noted above.

Accordingly, the environmental setting must also note all measures that the Air District has already established to decrease refinery-wide pollution by approximately 15%. Specifically, the Draft EIR must address how refinery emissions may increase beyond the Emission Caps given that already-required 15% reduction, and under what current or future foreseeable refinery modification scenarios, such as a switch to a more polluting crude oil feedstock, Emission Caps could cause the need for expensive pollution control equipment.

²⁵ Staff Report at 24 (emphasis added).

²⁶ See *supra*, BAAQMD Regulatory Concept Paper, October 2012.

²⁷ See prior comments submitted by CBE on 10/21/15, 11/23/15 and 6/10/16.

²⁸ Staff Report at 25.

(ii) The Draft EIR Must Include an Adequate Discussion of Foreseeable Changes to the Environmental Setting in its Discussion of the No Project Alternative

The CEQA Guidelines have explicitly rejected the notion that the “no project” alternative may simply reflect current conditions as assessed in an EIR’s environmental setting, or even maintenance of such status quo. Rather, CEQA Guidelines § 15126.6(e) provides that a “no project” alternative must address “what would be reasonably expected to occur in the foreseeable future if the project were not approved, based on current plans and consistent with available infrastructure.” Further, the Guidelines continue to elaborate upon how the “no project” alternative should proceed in this specific instance:

When the project is the revision of ... a regulatory plan, policy or ongoing operation, the “no project” alternative will be the continuation of the existing plan, policy or operation into the future ... the projected impacts of the proposed plan or alternative plans would be compared to the impacts that would occur under the existing plan.²⁹

Therefore, the Draft EIR “no project” alternative must not only outline foreseeable changes to the environmental setting, but also evaluate how the Air District’s current regulations, without Rule 12-16, could protect public health given those changes, particularly with regard to any disproportionate impact on low-income communities of color. This requires full disclosure and evaluation of the foreseeable climate and local pollution impacts that could result from the several Bay Area refinery expansion projects that enable the refining of lower quality oil feedstocks, and also, how the Air District’s regulations with and without Rule 12-16 can reduce such impacts. Necessarily, this also requires a discussion of the “infrastructure inertia” created by the commitment to major capital refinery investments in process changes to enable more refining of more climate-disrupting feedstocks for the foreseeable future. The “no project” alternative also should discuss potential conflicts between these projects and the State’s climate policies, including an analysis of the opportunity cost of a sustainable energy future.

Finally, the NOP/IS apparently creates a false choice between Rules 12-16 and 11-18. Whilst Rule 11-18 targets various toxic air contaminants, it does not target, as Rule 12-16 does, GHGs and PM_{2.5}. Moreover, the number of sources potentially affected by Rule 11-18 stands in stark contrast to the few affected by Rule 12-16. Each rule considers a significantly different range and source of pollutants. In fact, CEQA requires that an alternative “feasibly accomplish most of the basic objectives” of the proposed project.³⁰ Aside from the clear public health benefits of both rules, it is hard to imagine a single basic objective common to both Rules 12-16 and 11-18. We have consistently requested Air District staff to sever environmental review of the two proposals, but at a minimum, consideration of one as an alternative to the other simply does not make sense and violates CEQA.

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²⁹ CEQA Guidelines § 15126.6(e)(2)(3)(A).

³⁰ CEQA Guidelines § 15126.6(c).

III. Conclusion

The NOP/IS mischaracterize or omit information relevant to the determination of how Rule 12-16 complements the requirements of the Clean Air Act and the State's climate policies. Adherence to the Air District Board's November 16 direction, and the CEQA Guidelines as noted above, may remedy these errors in the Draft EIR for Rule 12-16.

Respectfully Submitted,

Devorah Ancel
Staff Attorney, Sierra Club

Kevin Bundy
Senior Attorney and Climate Legal Director, Center for Biological Diversity

Laurence G. Chaset
Attorney at Law, Sustainable Energy Futures on behalf of 350 Bay Area

Roger Lin
Staff Attorney, Communities for a Better Environment

David Pettit
Senior Attorney, Natural Resources Defense Council

Comment also supported by:

Janice L. Kirsch, M.D., M.P.H.
San Francisco Bay Area Chapter, The Climate Mobilization

Steve Nadel and Charles Davidson
Sunflower Alliance

Nancy Rieser
Crockett-Rodeo United to Defend the Environment

David McCoard
SF Bay Chapter, Sierra Club Energy-Climate Committee

Katherine Black
Benicians for a Safe and Healthy Community

Bradley Angel
Greenaction for Health and Environmental Justice

Richard Gray
350 Bay Area

Denny Larson
Community Science Institute

Ratha Lai
Asian Pacific Environmental Network

Janet Johnson
Richmond Progressive Alliance

Nan Parks
350 East Bay

Jan Warren
Interfaith Climate Action Network of Contra Costa County

Luis Amezcua
Sierra Club Bay Chapter

ATTACHMENT B



Air Resources Board



Matthew Rodriguez
*Secretary for
Environmental Protection*

Mary D. Nichols, Chair
1001 I Street • P.O. Box 2815
Sacramento, California 95812 • www.arb.ca.gov

Edmund G. Brown Jr.
Governor

April 5, 2017

Mr. Jack Broadbent
Executive Officer
Bay Area Air Quality Management District
375 Beale Street, Suite 600
San Francisco, California 94105

Dear Mr. Broadbent:

We understand the Bay Area Air Quality Management District is considering three new rules to address air pollution from refineries and other industrial facilities. I am writing to assure you that we support the intent of these rules and agree more can and must be done to deliver real reductions in the pollutants that are impacting the health of residents living near refineries and other large industrial facilities. We view the draft rules as an important first step in that direction. Indeed, as you may be aware, the California Air Resources Board (ARB) also is developing additional statewide regulations on these matters. This letter provides our brief comments on the proposed rules and discusses how the District, the California Air Pollution Control Officers' Association, and the ARB can work together to implement a comprehensive solution.

ARB staff strongly supports District action to develop, adopt, and enforce more stringent rules to reduce the health risk from stationary sources of air toxics, especially in impacted communities that are more vulnerable due to existing pollution burdens and socioeconomic conditions. The District staff's Draft Regulation 11, Rule 18 would require facility-by-facility risk assessment and emission reductions to get each facility below a cancer risk of 10 chances in a million, as achievable with toxics best available retrofit control technology. Based on ARB staff's preliminary analysis, we believe the approach described in the draft rule would be an effective mechanism to cut stack and fugitive emissions at refineries and other facilities. Moreover, your actions complement efforts by ARB to develop tighter regulations for trucks and ships at berth to further reduce emissions of toxic diesel particulate matter and other pollutants from both marine tankers delivering crude oil to refineries and trucks carrying gasoline and diesel fuel to market.

*The energy challenge facing California is real. Every Californian needs to take immediate action to reduce energy consumption.
For a list of simple ways you can reduce demand and cut your energy costs, see our website: <http://www.arb.ca.gov>.*

California Environmental Protection Agency

Mr. Jack Broadbent
April 5, 2017
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To augment the proposed air toxics rule, we encourage the District to continue investing in air monitoring enhancements (like remote sensing) and improving its emission inventories, which are critical given recent studies suggesting that fugitive emissions from refineries (and other sources) may be greater than current measurements indicate. ARB staff advocates aggressive enforcement at refineries and all stationary sources in the District. These efforts can help address toxic exposures, odors, and other community concerns. Your continued coordination with State and local authorities in targeted enforcement initiatives is essential to lessen the pollution burden in disadvantaged communities.

With regard to the District's draft Regulation 12, Rule 16, limiting emissions increases from refineries, and the new concept in Regulation 13, Rule 1, establishing a carbon intensity cap for refineries, we agree that both the approaches could help to ensure that these sources do not add to the state's overall emissions of greenhouse gases and criteria or toxic pollutants. Moreover, ARB is currently considering what actions might be taken to achieve additional reductions in toxic and criteria pollutants from refineries and we have identified that further action is needed throughout the state to expand public health protection for impacted communities. We would appreciate the opportunity to work with you and other affected air districts to develop complementary rules that can achieve the results that we and the communities want and expect.

To this end, we recommend establishing an industrial source action committee within the California Air Pollution Control Officers' Association, with an initial focus on refineries. The committee would be tasked with performing a rigorous engineering evaluation to identify measures to further cut emissions of all air pollutants from refineries, as well as coordinating and facilitating the implementation of such measures. You have my commitment that this effort will be a high priority for ARB staff.

Thank you for your consideration of the comments and issues raised here. If you have any questions or wish to discuss this letter, please contact me at (916) 322-7077.

Sincerely,

A handwritten signature in blue ink, appearing to read 'R. W. Corey', with a stylized flourish at the end.

Richard W. Corey
Executive Officer

cc: See next page.

Mr. Jack Broadbent
April 5, 2017
Page 3

cc: Matt Rodriguez
Secretary for Environmental Protection
California Environmental Protection Agency
1001 I Street
Sacramento, California 95814

Honorable Liz Kniss, Chair
Bay Area Air Quality Management District
Board of Directors
375 Beale Street, Suite 600
San Francisco, California 94105

W. James Wagoner, President
California Air Pollution Control
Officers' Association
1107 9th Street
Sacramento, California 95814

Honorable Board Members
California Air Resources Board

California Environmental Justice Advisory
Committee Members
California Air Resources Board

Mr. Jack Broadbent
April 5, 2017
Page 4

bcc: (via email)

Alberto Ayala, EO
Edie Chang, EO
Veronica Eady, EO
Kurt Karperos, EO
Ellen Peter, EO
Stanley Young, CO
Michael Benjamin, MLD
Cynthia Marvin, TTD
Todd Sax, ED
Floyd Vergara, ISD
Doug Ito, TTD
Rajinder Sahota, ISD
David Hults, Legal
Craig Segall, Legal
Elizabeth Yura, TTD
Sydney Vergis, Leg Office

Gina Solomon, CalEPA
Ashley Conrad-Saydah, CalEPA
Arsenio Mataka, CalEPA

Saul Gomez, GO
Catalina Hayes-Bautista, GO
Peter Krause, GO
Alice Reynolds, GO
Camille Wagner, GO

Elizabeth Adams, US EPA Region 9

Larry Allen, SLOAPCD
Wayne Natri, SCAQMD
Seyed Sadredin, SJVAPCD
Alan Abbs, CAPCOA

Greg Karras, CBE
Kathryn Phillips, Sierra Club

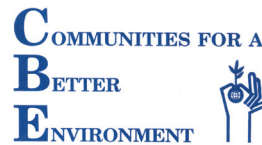
ATTACHMENT C

21 April 2017

Jack Broadbent, Air Pollution Control Officer
Bay Area Air Quality Management District
375 Beale Street, Suite 600
San Francisco, CA 94105

Via electronic mail to:

Gregory Nudd, gnudd@baaqmd.gov
Victor Douglas, vdouglas@baaqmd.gov
Eric Stevenson, estevenson@baaqmd.gov
Guy Gimlen, ggimlen@baaqmd.gov
Idania Zamora, izamora@baaqmd.gov



Re: Comment on Draft Rule 13-1, Refinery-level Emission Intensity Limits

Dear Mr. Broadbent,

Draft Rule 13-1 seeks to address energy-related (combustion) emissions from oil refining by setting facility-specific limits on emissions per barrel of oil refined, also known as refinery “emission intensity.” By this letter we respectfully provide comments and recommendations on this Draft Rule (DR).

Five major oil refineries collectively emit more GHGs and more particulate matter (PM_{2.5}) than any other industrial sector in your jurisdiction. PM_{2.5} kills an estimated 2,000–3,000 Bay Area residents annually,¹ and GHGs threaten catastrophic climate disruption. Industry plans to refine lower quality oil, which requires burning more fuel for process energy, threaten to increase region-wide refinery emission intensity for these and other combustion pollutants by as much as 40–100 %.² By contrast, the DR’s energy efficiency measures shave only 0.03–3.6 % from the refiners’ current emission intensity (emissions per barrel oil refined).³ Thus, the crucial goal of Rule 13-1, as the Air District staff states it in the Concept Paper,⁴ is to “[e]nsure refinery combustion emissions do not increase on a per-barrel basis.”

We strongly support the goal of ensuring that refinery emission intensity does not increase, however, serious errors and omissions in the proposed DR must be corrected in a revised version of Rule 13-1 before this measure could achieve that goal, as discussed in our comments and recommendations below.

¹ BAAQMD *Clean Air Plan 2017* (*see* pp. C/5–C/7); and BAAQMD *Update on Regulation 6: Particulate Matter Rule Update, Stationary Source Committee*; 17 April 2017 (*see* Slide 4).

² *See* 2 December 2016 CBE Technical Report to BAAQMD on the Draft EIR Scope for proposed Rule 12-16.

³ BAAQMD Staff Draft Rule 13-1 Workshop Report Emissions Limits Methodology.

⁴ BAAQMD *Concept Paper – Rule 13-1: Refinery Carbon Intensity Cap*; updated 23 January 2017.

1. Revise the DR to directly control climate- and health-threatening emissions.

The DR exempts refinery combustion emissions of health-threatening air pollutants from direct control under Rule 13-1 by excluding PM_{2.5}, PM₁₀, NO_x, and SO₂ from its limits. This is inconsistent with the District's stated purpose to control these refinery combustion emissions as well as GHGs,⁴ unnecessary because available data support performance-based limits on each of these pollutants,⁵ and inappropriate because it serves to perpetuate environmental injustice. We recommend that the DR be revised to include emissions per barrel limits on PM_{2.5}, PM₁₀, NO_x, SO₂, and GHGs (CO₂e).

2. Reject the exemption from emission intensity limits at reduced refinery production rates that is proposed in the DR.

Preventing emissions caused by increased refinery emissions intensity (emissions per barrel oil refined) when a refinery reduces production (refines fewer barrels of oil) is the uniquely important purpose of proposed Rule 13-1. Other existing and planned measures will prevent emissions from increased refinery emission intensity at current production (mass emission caps Rule 12-16), and could reduce emissions through engineered controls and through reducing oil use, thereby reducing refinery production—*provided that Rule 13-1 is effective*. Indeed, the State has endorsed this combination of measures that would work together to cap and cut emissions, including rules 13-1 and 12-16, along with other regional and statewide health and climate protections, in a recent letter supporting these complementary measures.⁶

But as proposed, Rule 13-1 would not be effective. The DR proposes to exempt refiners from emission intensity (emission/barrel) limits whenever they reduce production (the number of barrels refined). This proposed new policy to allow emissions would conflict with the purpose of this rule and with regional and state policies and plans. We object to this proposed allowance and request that the DR be revised to remove this exemption.

3. Revise the DR to include publicly verifiable refinery emission intensity limits.

Incredibly, the DR includes no numeric limits whatsoever, instead proposing to keep any actual emission limits that District staff might develop, monitor, enforce or revise under Rule 13-1 secret and publicly unverifiable. Both before and after public review and adoption of the rule, the DR proposes to base these limits on secret data for the amounts ("barrels") of oil refined—essential emissions data for this and any per-barrel emissions protection. This giveaway of public health protection oversight to secret pollution allowances, negotiated with polluters out of the public's view, appears absurd on its face. Here, where the oil industry already proved its ability to "game" air permitting based on confidential data, as shown by CEQA rulings in the courts,⁷ gaining allowances to emit at a region-wide carbon intensity that already exceeds the nationwide average refinery carbon intensity,^{2,8} the fallacy and failure of such "secret limits" is manifest.

We strongly object to this proposal for secret refinery emission allowances.

⁵ See tables 12-16-301 through 12-16-305, Revised Proposed Rule 12-16 (March 2016).

⁶ 5 April 2017 Letter from Richard Corey, California Air Resources Board, to Jack Broadbent, BAAQMD.

⁷ See *CBE v. City of Richmond* 184 Cal. App. 4th.

⁸ Karras, 2010. Combustion Emissions from Refining Lower Quality Oil: What Is the Global Warming Potential? *Environmental Science & Technology* **44**: 9584–9589. DOI: 10.1021/es1019965.

Moreover, the excuse for this inappropriate secrecy—the claim that historic long-term average refinery oil feed rates are trade secrets—is itself based on a falsehood. These data are not secrets: these data are reported publicly.

For example, actual refinery process rates for atmospheric crude oil distillation and oil feedstock conversion (cracking and coking), the relevant “barrels” data for facility level per-barrel caps on combustion emissions from the Bay Area refineries, are reported publicly in Clean Water Act discharge permit reviews.⁹ *See* Table 1.

Table 1. Actual refinery oil feed rates reported publicly in Clean Water Act permits

	Crude feed rate (barrels/day)	Conversion feed rate (barrels/day)	Total of feed rates (barrels/day)
Chevron Richmond refinery	244,600	190,900	435,500
Phillips 66 Rodeo refinery	84,020	90,300	174,320
Shell Martinez refinery	149,200	144,300	293,500
Tesoro Golden Eagle refinery	143,600	139,800	283,400
Valero Benicia refinery	140,100	131,500	271,600

Maximum 12-month average atmospheric crude distillation rates and conversion (coking, catalytic cracking and hydrocracking) oil feed rates in the most recent 5 years reported, from Attachment F-1 of Clean Water Act NPDES permits.⁹

These data,⁹ along with publicly verified refinery mass emission rates the Air District reported recently,⁵ support the performance-based emission intensity limits shown in Table 2.

We recommend that, unless and until the Air District discloses additional data and shows that those additional data support more accurate publicly verifiable emission intensity caps, the DR should be revised to include these limits.

**Table 2. Proposed performance-based oil refinery emission intensity limits
(emissions per barrel oil fed to crude and conversion processing)**

<i>Emissions per barrel (b)</i>	CO ₂ e (kg/b)	PM _{2.5} (grams/b)	PM ₁₀ (grams/b)	NO _x (grams/b)	SO ₂ (grams/b)
Chevron Richmond refinery	28.1	2.68	2.80	5.18	2.10
Phillips 66 Rodeo refinery	37.5	1.21	1.34	4.03	5.24
Shell Martinez refinery	39.8	3.92	4.66	8.45	11.5
Tesoro Golden Eagle refinery	30.3	0.87	1.03	9.37	5.30
Valero Benicia refinery	29.7	1.13	1.14	11.1	0.60

Based on maximum annual emissions in the most recent 5 years reported, from Proposed Rule 12-16⁵ divided by maximum 12-month average total of oil feed rates to crude distillation and conversion units in the most recent 5 years reported, from Clean Water Act permits (*see* Table 1).⁹ Support facilities included: Air Liquide included in Phillips 66 emissions; Air Products and Martinez Cogen included in Tesoro emissions.

⁹ *See* CBE, 2017. *Report on Data for Oil Feed Rates and Capacities of Refineries in the Jurisdiction of the Air District That Have Been Reported Publicly by Other Government Agencies*; technical report provided to the BAAQMD at its request on 28 February 2017.

4. Revise the DR to better limit combustion emission intensity and protect local refinery workers' jobs by excluding gasoline blending components and naphtha from refinery emission intensity limits.

The DR erroneously includes gasoline blending components and naphtha—oils that may require little more than blending into the gasoline pool at the refinery upon delivery from an outside source—in its calculation of refinery combustion emission intensity limits. These very light oils require much less energy for processing than the conversion of crude and its denser components to engine fuels. By weighting barrels of these inputs equally with barrels of crude and gas oil processed, the DR's approach commits an error.

Gasoline blending component imports from foreign sources account for only a small fraction (0–0.7 %) of total Bay Area refinery oil inputs now,⁹ but such imports grow along with refiners' incentives to receive them. Importing them in much larger amounts after the DR's proposed approach (which includes these gasoline blendstocks in the “barrels” of its emissions-per-barrel limit compliance calculation) is implemented would artificially lower the emissions reported per barrel of total included oil input.

Failure to correct this error in the DR would encourage refiners to consider new oil feed blends that include larger volumes of cheaper, higher-emitting grades of crude oil along with larger volumes of imported gasoline blendstocks that would allow them to skirt the intent of Rule 13-1 by reporting artificially low emissions per barrel.

Thus, this error in the DR risks at least two unintended negative consequences. First, it risks failure to detect and limit an increase in the emission intensity of crude oil refining in the event that refiners increase in-plant finishing of gasoline-like imports. Second, because the same loophole encourages refiners here to import essentially finished gasoline that otherwise might be produced from relatively lower-emitting crude feeds here, this error in the DR might put refinery jobs here at risk unnecessarily. Therefore, we recommend that the DR be revised to exclude gasoline blending components and naphtha from its per-barrel emission intensity limits.

5. Emission intensity caps and mass emission caps are complementary measures.

Air District staff has asserted that proposed Rule 13-1 and proposed Rule 12-16 are “either-or” alternatives. This staff assertion is not accurate. As stated, per-barrel emission caps function differently from per-year emission caps; each type of cap can provide emission control benefits that the other cannot provide by itself, and both can work together to more effectively protect our health and climate. This District staff assertion also appears to be contradicted by the State's recent letter⁶ supporting both Rule 12-16 and Rule 13-1 as measures that can and should work together with other District and State measures to better protect our health and climate.

Accordingly, we request that the Air District provide a corrected and complete analysis in support of revised Rule 13-1 as a necessary complement to Rule 12-16 and other federal, state and local health and climate protection measures, plans and policies.

Jack Broadbent, APCO

21 April 2017

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Conclusion

We strongly support the goal of ensuring that oil refinery emissions intensity will not increase, and urge you to consider acting on our recommendations for correcting serious errors and omissions in proposed Draft Rule 13-1 discussed in these comments, so that this needed health and climate protection measure can achieve that crucial goal.

Respectfully,

Greg Karras, Senior Scientist
Communities for a Better Environment (CBE)

Miya Yoshitani, Executive Director
Asian Pacific Environmental Network (APEN)

Steve Nadel and Charles Davidson
Sunflower Alliance

Richard Gray
350 Bay Area

Janet Scoll Johnson
Richmond Progressive Alliance (RPA)

Jan Warren
Interfaith Climate Action Network Contra Costa County

Nancy Rieser
Crockett-Rodeo United to Defend the Environment (C.R.U.D.E.)

Katherine Black
Benicians for a Safe and Healthy Community (BSHC)

Kathy Kerridge
Good Neighbor Steering Committee of Benicia

Diane Bailey
Bay Area Environmental Advocate

Denny Larson, Executive Director
Community Science Institute

Bob Harlow
Mill Valley Community Action Network, and
United Marin Rising

Luis Amezcua
Sierra Club

Copy: Interested organizations and individuals

ATTACHMENT D



Bay Area Air Quality Management District
375 Beale Street, Suite 600
San Francisco CA 94105

VIA EMAIL

mhiratzka@baaqmd.gov
Marcy Hiratzka
Clerk of the Board

July 14, 2016

RE: Legal Analysis of the Bay Area Air Quality Management District's Authority to Adopt Petroleum Refining Facility "Emission Caps" in Proposed Rule 12-16

Chair Mar and Members of the Board:

Since at least 2012, the Bay Area Air Quality Management District ("Air District") has acknowledged the influx of lower quality oils into the Bay Area and admitted the occurrence of "increased emissions of air contaminants" and emission increases as a result of "accidents related to the increased corrosiveness of lower quality crudes."¹

Air District staff have noted that "processing lower quality crudes also requires more intense processing and higher energy requirements," resulting in increased emissions of greenhouse gases ("GHG") and GHG co-pollutants.² The Air District's Emissions Tracking Rule, Regulation 12, Rule 15 ("Rule 12-15") was intended to include a mechanism to address these increasing emissions. During the development of Rule 12-15, industry commenters questioned the Air District's authority to adopt a regulation to mitigate health and safety risks posed by the refining of lower quality oils. The Air District then deferred further consideration of mitigating increasing emissions to proposed Regulation 12, Rule 16 ("Rule 12-16").

This has resulted in unreasonable regulatory delay in the adoption of such essential mitigation and preventative measures. In the interim, the Air District has permitted at least three refinery expansion projects that enable those refineries to process and refine lower quality crude oil feedstocks, the same "processing upgrades" the Air District acknowledged in 2012, and with no preventative backstop in place to address that increasing air pollution.³ The proposal offered by several community, academic, public health and worker groups to adopt enforceable numeric emission limits at refineries ("Emission Caps") is such a backstop.

¹ BAAQMD Regulatory Concept Paper, Petroleum Refining Emissions Tracking Rule, Draft, October 15, 2012, citing The U.S. Oil Refining Industry: Background in Changing Markets and Fuel Policies" (Nov. 22, 2010), available at http://www.baaqmd.gov/~media/files/planning-and-research/rules-and-regs/workshops/2013/1215_dr_rpt032113.pdf?la=en.

² *Id.*

³ In 2013, the Air District permitted the Kinder Morgan Richmond Terminal Crude by Rail Project; in 2014, the Chevron Richmond Refinery Modernization Project; in 2015, the Phillips 66 Rodeo Refinery Propane Recovery Project.

In order to expedite the rulemaking process and adequately address the increasing influx of lower quality oil into the Bay Area, Communities for a Better Environment (“CBE”), 350 Bay Area and Sierra Club submit the following comments regarding the Air District’s authority to adopt Emission Caps. These comments detail why the Emission Caps are authorized by law and are needed now.

Comments Summary:

- I. The Air District has broad authority to adopt Emission Caps. Specifically:
 - Adoption of Emission Caps is consistent with the California Health and Safety Code,
 - Adoption of Emission Caps complements and furthers the goals of AB 32, and
 - Adoption of Emission Caps would not constitute “takings.”
- II. The California Environmental Quality Act (“CEQA”) provides the proper procedural avenue to develop or clarify necessary findings.
- III. Emission Caps are necessary now because:
 - Lower quality oils are replacing traditional California sourced oil,
 - Refining lower quality oils increases air pollution, and
 - An Emissions Cap prevents those increases in air pollution.

I. The Air District Has Broad Authority to Adopt Emission Caps

California courts have consistently recognized air districts’ “broad authority” to regulate emissions from stationary sources.⁴ “The air pollution control district is *the* agency charged with enforcing both statewide and direct emission controls.”⁵ The legislature has made it clear that “local and regional authorities have the *primary* responsibility for control of air pollution from all sources other than emissions from motor vehicles.”⁶

Air District regulations must, however, meet certain criteria, including those detailed in California’s Health and Safety Code, harmonize with other California climate laws, such as AB 32, and constitute a valid exercise of police power. Adoption of Emission Caps meets these requirements as detailed below.

A. Adoption of Emission Caps Is Consistent with the California Health and Safety Code

Contrary to various industry comments, the California Health and Safety Code does not limit an Air District’s role to simply implementing state and federal regulations. In fact, the Health and Safety Code explicitly states the opposite: “[Air] districts . . . determine the form,

⁴ *Ultramar, Inc. v. South Coast Air Quality Management Dist.* (1993) 17 Cal.App.4th 689, 708, citing *Western Oil & Gas Assn. v. Monterey Bay Unified Air Pollution Control Dist.* (1989) 49 Cal. 3d 408.

⁵ *Orange County Air Pollution Control Dist. v. Public Util. Comm.* (1971) 4 Cal.3d 945, 948 (emphasis in original).

⁶ Cal. Health and Safety Code § 40000.

content, and stringency of their rules and regulations.”⁷ It is “the intent of the Legislature that the districts retain their existing authority and flexibility to tailor their air pollution emission control requirements to local circumstances.”⁸

Also, section 40001(a) provides that:

“the [Air] districts shall adopt and enforce rules and regulations to achieve and maintain the state and federal ambient air quality standards in all areas affected by emission sources under their jurisdiction, *and* shall enforce all applicable provisions of state and federal law.” (emphasis added)

The legislature’s inclusion of the latter clause emphasizes that Air Districts do not simply have to maintain state and federal air quality standards; they may enact stricter rules. The courts have been in firm agreement. An air district’s broad authority was most succinctly and accurately described in an early court opinion addressing this issue: “[to] protect the purity of the air.”⁹ This is consistent with the Air District’s stated mission: “[t]he Air District aims to create a healthy breathing environment for every Bay Area resident while protecting and improving public health, air quality, and the global climate.”¹⁰

In one case challenging this broad authority, the Monterey Bay Unified Air Pollution Control District proposed Rule 1000, designating certain substances as a “toxic” or “carcinogenic” air contaminant.¹¹ The Western Oil & Gas Association challenged this rule and argued that local districts could not regulate a substance until the Air Resources Board had designated that substance as a pollutant. Noting that the “districts’ primary authority has been well understood,” the court held that air districts may more stringently regulate pollutants, even pollutants not considered by the state.¹²

Another case squarely addresses this issue. In 1991, the South Coast Air Quality Management District proposed to adopt a rule banning the use and storage of hydrogen fluoride (“HF”), a feedstock used as a catalyst in the production of gasoline, at oil refineries.¹³ Ultramar, a refining company, sued, contending that air districts’ regulatory powers were limited to the “achievement of state and federal ambient air quality standards” only, and any further regulation was beyond delegated authority.¹⁴ The Court of Appeal disagreed, emphasizing also that air districts possess inherent power to address both the abatement *and* prevention of air pollution episodes, whether or not regulated so by the state or federal regulations.¹⁵

Moreover, Health and Safety Code §40001(b) enables the Air District to prevent or abate “air pollution episodes which . . . cause discomfort or health risks to, or damage to the property

⁷ Cal. Health and Safety Code § 40727.2(h).

⁸ *Id.*

⁹ Milton H. Lees v. Bay Area Air Pollution Control Dist. (1965) 238 Cal.App.2d 850, 857.

¹⁰ BAAQMD Mission Statement, available at <http://www.baaqmd.gov/about-the-air-district/mission-statement>.

¹¹ Western Oil & Gas Assn. v. Monterey Bay Unified Air Pollution Control Dist. (1989) 49 Cal. 3d 408.

¹² *Id.* at 418.

¹³ Ultramar, Inc. v. South Coast Air Quality Management Dist. (1993) 17 Cal.App.4th 689.

¹⁴ *Id.* at 707.

¹⁵ *Id.*

of, a significant number of persons or class of persons.”¹⁶ This is relevant in three distinct respects, calling for swift adoption of the proposed Emission Caps: first, as noted immediately below, Particulate Matter (“PM”) has been determined by the Air District to be a cause of premature death in the Bay Area; second, the Air District has the authority and obligation to prevent catastrophic episodic emissions, such as the August 2012 Chevron Richmond Refinery fire; and third, to also prevent potentially significant climate disrupting pollution. The Legislature has explicitly documented the consequences of climate change and increased GHG pollution, finding that it poses a threat to “public health” and will cause a “reduction in the quality and supply of water to the State” among many other harmful consequences.¹⁷

It is well documented that the impacts of climate change and refinery pollution disproportionately impact low-income and fence line communities-of-color. The Air District notes:

Despite progress in reducing PM levels and related health impacts, exposure to fine PM remains the leading public health risk, and contributor to premature death, from air pollution in the Bay Area.¹⁸

This stark statement even underestimates personal exposure to refinery combustion related pollutants. A study of indoor air near the Chevron Richmond Refinery determined that Richmond residents are consequently exposed to higher levels of PM_{2.5} in their homes than outdoors.¹⁹ Research concluded that refinery and port emissions of sulfates, nickel, and vanadium, which are among the most harmful components of PM_{2.5}, penetrated indoors.²⁰ The pollution in nearly half of the fence line community homes tested exceeded California’s ambient air quality standards for PM_{2.5}.²¹

Refineries make up eight of the top ten California facilities that disproportionately pollute in such low-income communities of color.²² A switch to refining a lower quality feedstock will simply increase that PM and PM precursor pollution. GHG and particulate air pollution co-emit from the same combustion sources and causes in refineries, including intensive energy use that is driven by lower quality oil feedstock.²³ Indeed, the Air District itself has shown that a multi-pollutant approach to such combustion emissions from refineries is effective and necessary.²⁴ The Air District should adopt a limit on GHGs *as well as* its co-pollutants: PM, SO₂, and NO_x. The proposed Emission Caps do just that.

¹⁶ See *Ultramar, Inc. v. South Coast Air Quality Management Dist.* (1993) 17 Cal.App.4th 689, 706-08.

¹⁷ Cal. Health and Safety Code § 38501.

¹⁸ BAAQMD Summary of PM Report (2012), available at <http://www.baaqmd.gov/~media/files/planning-and-research/plans/pm-planning/summary-of-pm-reportnov7.pdf>.

¹⁹ Julia Brody et. al., *Linking Exposure Assessment Science With Policy Objectives for Environmental Justice and Breast Cancer Advocacy: The Northern California Household Exposure Study* (2009).

²⁰ *Id.* at S605.

²¹ *Id.* at S604.

²² Pastor, Morello-Frosch, Sadd, Scoggins, *Minding the Climate Gap*, Executive Summary, p. 7, available at https://dornsife.usc.edu/assets/sites/242/docs/mindingthegap_executive_summary.pdf.

²³ See the expert analysis and evidence discussed in and provided as attachments to CBE’s Supplemental Comment on Air District Staff Proposal, Rules 12-15 and 12-16; Evidence of Increasing Bay Area Refinery GHG and PM_{2.5} Emissions, October 2015.

²⁴ May 2016 Draft Staff Report for Rule 12-16, *Options for Reducing Refinery Combustion Emissions*, at 1–6.

Finally, a timely emissions cap is also crucial because of the well-documented problem of “infrastructure inertia.”²⁵ Refining lower quality crudes requires infrastructure modifications and these modifications tend to make future emissions reductions much more difficult as such projects become “locked in.” In the Bay Area, these projects so far include the Richmond Chevron Refinery Modernization Project, the Phillips 66 Rodeo Refinery Propane Recovery Project, and the Valero Benicia Refinery Crude by Rail Project. The Air District has acknowledged that “it is reasonable to expect” that the Bay Area refineries will “follow the general industry-wide trend towards increased processing of lower quality crudes,” and that processing these crudes will “cause more emissions.”²⁶ In addition, like Assembly Bill (“AB”) 32, the Intergovernmental Panel on Climate Change warns against the permanent impacts of new commitments to continue using fossil fuels,²⁷ and subsequent authoritative analysis²⁸ indicates that virtually all of the remaining “tar sands” oil resources cannot be produced, refined, or otherwise burned without risking severe and irreversible climate impacts. Put simply, time is of the essence, and it is necessary and reasonable for the Air District to limit emissions now to protect public and worker health and safety.

B. Adoption of Emission Caps Complements and Furthers the Goals of AB 32

Also contrary to industry comments, adoption of a GHG Emission Cap is not duplicative of, but rather, complements California’s current regulatory system of addressing GHG emissions. In addition, any suggestions that a GHG Emission Cap will contribute to “leakage” are misplaced and irrelevant.

Emission Caps Are Not Duplicative of AB 32

“Nonduplication” means that a regulation does not impose the same requirements as an existing state or federal regulation, unless a district finds that the requirements are necessary or proper to execute the powers and duties granted to, and imposed upon, a district.²⁹ The Emission Caps provide an additional regulation, and should not be confused with the “cap” of the State’s cap-and-trade program. Alternatively, for the reasons detailed herein, Emission Caps are a necessary and proper exercise of the Air District’s authority to protect public and worker health and safety.

In 2006, the Legislature passed The Global Warming Solutions Act (AB 32) declaring that global warming poses a “serious threat to the economic well-being, public health, natural resources, and the environment of California.”³⁰ To counteract this threat, CARB was tasked with designing and implementing measures to lower statewide greenhouse gas emissions to 1990 levels.³¹

²⁵ Jim Williams, ARB Chair’s Lecture Series, 13 May 2015; www.arb.ca.gov; See Davis et al., 2010. *Science*. DOI: 10.1126/science.1188566; Williams et al., 2011. *Science*. DOI: 10.1126/science.1208365; and Williams, 2015 ARB Chair’s Lecture Series; 13 May 2015.

²⁶ *Id.*

²⁷ IPCC Fifth Assessment Report, available at www.ipcc.ch/report/ar5/index.shtml.

²⁸ McGlade and Ekins, 2015. The geographical distribution of fossil fuels unused when limiting global warming to 2 °C. *Nature* 517: 187. DOI: 10.1038/nature14016.

²⁹ Cal. Health and Safety Code § 40727.

³⁰ Cal. Health and Safety Code § 38501(a).

³¹ Cal. Health and Safety Code §§ 38560-65.

One such distinct measure is the cap-and-trade program, where refiners that lower emissions can sell pollution “Allowances.” An Allowance is an integral part of the cap-and-trade program, which sets a “cap” on statewide GHG emissions *economy-wide*. Even the refining industry as a whole has no cap on GHG emissions, and moreover, there is no facility cap. The economy-wide cap decreases over time, thereby achieving GHG emission reductions throughout the cap-and-trade program’s duration, currently until 2020. Each participating facility is then required to surrender one permit to emit, the majority of which will be cap-and-trade Allowances, for each ton of GHG emissions that they emit. The refining industry also receives certain “free allowances,” and can purchase additional allowances at auction or from third parties. A GHG Emission Cap on refineries—that prevents facility emissions from increasing—is clearly a different type of requirement than the state’s economy-wide cap. As detailed below, nothing in AB 32 restricts an air district’s inherent authority to also regulate GHG emissions from stationary sources and such efforts are complementary to the State’s GHG reduction goals.

AB 32 Does Not Preempt Adoption of Emission Caps

State preemption of local regulation is either express or implied. The legislature can include plain language in a provision stating that it will preempt any local regulation.³² Alternatively, state laws may contain language clearly indicating that the subject matter is too important to the state to “tolerate . . . [local] action,” or the subject matter is otherwise “fully and completely covered” by the state.³³

Implied preemption cannot occur when “the Legislature has expressed its intent to permit local regulations.”³⁴ AB 32 explicitly allows air districts to pass their own emission reduction requirements: “[n]othing in this division shall limit . . . the existing authority of any [air] district.”³⁵ There is simply no issue of preemption in this case.

Emission Caps Are Complementary GHG Reduction Mechanisms to AB 32

In fact, Emission Caps are complementary to AB 32. As CARB states:

AB 32 requires California to reduce its GHG emissions to 1990 levels by 2020—a reduction of approximately 15 percent below emissions expected under a “business as usual” scenario.

The timing of this goal is essential. In 1990, the refining industry’s “business as usual” did not reflect the industry-wide shift to lower quality oils, such as tar sands. Moreover, the Legislature passed AB 32 in 2006. Only later did communities in Richmond, and California for that matter, first learn about the industry’s potential shift to a dirtier crude feedstock in addressing the Chevron Richmond Refinery’s Hydrogen Renewal Project—the first of the many

³² See, e.g., Cal. Water Code §521(f) (“It is the intent of the Legislature that this chapter supersede and preempt all enactments and other local action of cities and counties, including charter cities and charter counties, and other local public agencies that conflict with this chapter.”).

³³ O’Connell v. City of Stockton (2007) 41 Cal.4th 1061, 1068.

³⁴ Valley Vista Services, Inc. v. City of Monterey Park (2004) 118 Cal.App.4th 881, 887.

³⁵ Cal. Health and Safety Code § 38594.

refinery infrastructure expansion projects to enable the refining of lower quality oils that we see today.³⁶ The Air District's cited Congressional Research Service's report on "Changing Markets and Fuel Policies" was not released until 2010.

In 2006, the cap-and-trade program was just not designed to account for a sudden surge in GHG emissions as a result of the relatively more recent refining phenomenon of seeking lower quality crudes. The potentially massive increase in climate-disrupting pollution may well derail the AB 32 program. An Emissions Cap is not only complementary, but also necessary, to ensure attainment of 1990 levels of GHG emissions by 2020. And, as described herein the Air District has the authority to abate the disproportionate quantity of GHG, PM, NO_x, and SO_x pollution emitted by local refineries to ensure GHG emissions trajectories are consistent with state and federal climate change policy goals, and to protect public and worker health and safety.

In addition, an Emissions Cap does not interfere with CARB's administration of the cap-and-trade program. The purpose of the cap-and-trade program in this instance is to ultimately reduce GHG emissions, and a stricter refining facility-specific cap simply furthers that purpose. Although an Emissions Cap may decrease the need for Bay Area refiners to purchase Allowances, it would not create any Allowances to sell elsewhere in the state because it would not force any emission reduction, and all covered sources including refineries would still be subject to the economy-wide cap-and-trade cap. Similarly, this would not incentivize other California refiners to pollute any more than the existing option for those California refiners to purchase additional offsets should they choose to increase facility GHG emissions.³⁷

Furthermore, despite recent CARB action, given the uncertainty of the cap-and-trade program after 2020, the Air District has a responsibility to protect its jurisdiction from increased refinery emissions now. Two cases are making their way through the courts challenging the legality of cap-and-trade.³⁸ In addition, the purchase of Allowances has recently significantly declined, raising subsequent questions regarding the success, or failure, of the cap-and-trade program.³⁹ Reliance on cap-and-trade as the sole long-term solution to address GHGs is speculative.

AB 32 acknowledges that global warming cannot be remedied without national and international actions, but it also acknowledges that California's efforts "will have far-reaching effects by encouraging other states, the federal government, and other countries to act."⁴⁰ Likewise, an Emissions Cap will encourage other local, state, and federal bodies to take action,

³⁶ *Communities for a Better Environment v. City of Richmond* (2010) 184 Cal.App.4th 70.

³⁷ An allowance is a tradable permit to emit CO₂. It is *not* an offset. By contrast, refiners can avoid regional pollution reduction requirements by purchasing a number of "offsets" from carbon-saving projects, such as reforestation or forest management projects, elsewhere in the United States or Quebec.

³⁸ See Court of Appeal Turns a Careful Eye Toward Challenges to California's Cap-and-Trade Auction System, April 26, 2016, available at <http://www.lexology.com/library/detail.aspx?g=5116b146-bcff-41e3-829b-c54eeb58b597>.

³⁹ See, e.g., California Comes up \$600M Short From Cap-And-Trade Auction, May 2016, available at <http://www.law360.com/articles/801003/calif-comes-up-600m-short-from-cap-and-trade-auction>; California's cap-and-trade carbon emission system may be failing, May 2016, available at <http://www.sacbee.com/news/politics-government/politics-columns-blogs/dan-walters/article80107032.html>; California Cap-and-Trade Program and Québec Cap-and-Trade System May 2016 Joint Auction #7 Summary Results Report, available at http://www.arb.ca.gov/cc/capandtrade/auction/may-2016/summary_results_report.pdf.

⁴⁰ Cal. Health and Safety Code §38501(d).

and, importantly, would inform the state about the refinery sector's capacity for GHG reductions in its development of a post 2020 economy-wide cap.

This is consistent with the most recent United Nations Framework Convention on Climate Change, convened in Paris, France. Several representatives of “sub-national” organizations, including the State of California, were present. California was one of the leaders of the sub-national grouping, and Governor Brown signed the Subnational Global Climate Leadership Memorandum of Understanding,⁴¹ clarifying the role, responsibility and authority of any local or regional agency in California to take official action within the areas under its authority to fight climate change. Setting an Emission Cap on GHGs here will lay the path for more effective future statewide policy, and at a minimum, the development of successful and robust post-2020 GHG emission reduction strategies.

“Leakage” Is Irrelevant to Adoption of Emission Caps

Health & Safety Code §38505(j) defines leakage: “a *reduction* in emissions of greenhouse gases within the state that is offset by an increase in emissions of greenhouse gases outside the *state* (emphases added.)” To reiterate, the proposed Emission Caps will not require any change to current refinery operations—they are intended to act as a backstop and to stop refinery emissions from increasing. They propose no mandate to decrease or reduce emissions. Also, the proposed Emission Caps would not increase production by refineries in other states to supply the fuels that we need in California. This is because the proposed Emission Caps do not require any change in refinery petroleum or other fuel production, which currently far exceeds California demand.⁴² As there is neither a reduction in emissions, nor any perceived out-of-state shift in GHG pollution to meet California petroleum product demand, the issue of leakage is wholly irrelevant to the consideration of the proposed Emission Caps.

C. Adoption of Emission Caps Would Not Constitute “Takings”

Several industry commenters have stated that the imposition of Emission Caps would constitute an unconstitutional “taking.” This assertion is unsupported. Adoption of the proposed Emission Caps would not constitute a “taking,” and, for the sake of argument, even if it did, it would still be within the police power of the Air District, constituting a valid, constitutional use of its broad authority.

First, there is no takings issue as there is no “property” at issue. The concept of takings comes from the California Constitution: “[p]rivate property may not be taken for public use without just compensation being made to the owner.”⁴³ In this instance, the “property” that could be subject to takings are arguably the refiners’ current permits: that there is some right of ownership in a permit to pollute or emit up to a certain amount of GHGs, PM, NO_x or SO₂ beyond those required by the Emission Caps. Such a position overlooks the essence of the proposal: the Emission Caps do not mandate any reduction in emissions, but simply seek to stop

⁴¹ See Under 2 Subnational Global Climate Leadership Memorandum of Understanding, available at <http://under2mou.org/>.

⁴² See CBE Comment on Factual Information Regarding Global Climate Impacts of Bay Area Oil Refining to be Included in the EIR for Proposed Rule 12-16, June 29, 2016.

⁴³ Cal. Const., art. I, § 14.

emissions of these four pollutants from increasing beyond current levels. The only way some “property” could be involved is if there is some “vested right” to pollute above current levels, and up to maximum permitted levels of pollution. It is well settled, however, that refinery permits give [the refiner] no vested right to pollute the air at any particular level.⁴⁴

Second, for the sake of argument, even if such vested rights did exist, “the constitutional guaranty [against takings] . . . does not extend to the state’s exercise of its police power.”⁴⁵ This established precedent dates back to 1965, in *Lees v. Bay Area Air Pollution Control District*. In *Lees*, a property owner held a long-standing practice of using an incinerator for the disposal of rubbish and garbage at the property. The Air District enacted a regulation imposing emission limits on such incinerators. Application of that regulation in effect also practically prohibited the use of those incinerators. The property owner sued the Air District, arguing an unconstitutional taking of his private property. The court disagreed. The court reasoned that an “[Air Pollution Control] District’s regulation . . . [to] protect the purity of the air” is within the State’s police power. “The District exists for that very purpose. Its regulation is not only reasonable, but indeed essential, and represents a lawful and proper exercise of the police power.”⁴⁶ In *Lees*, the court upheld an Air District regulation that both limited emissions, and practically made it impossible to use certain polluting equipment that had traditionally been used as general practice. Emission Caps prove far less stringent—they would not preclude the use of any refinery equipment and as currently proposed do not even require emissions to decrease. In comparison, Emission Caps are a narrower, more specific use of an Air District’s police power.

To clarify and emphasize this point with a more recent case, this police power applies to adoption of a rule that would affect a validly held permit for the use of a certain pollutant. In the *Ultramar* case, it did not matter that Ultramar had a permit for the use of hydrogen fluoride (“HF”); irrespective of that claim of vested right, the court determined that Rule 1410 was an authorized use of an air district’s police power. The same decision also acknowledged an air district’s authority to prevent foreseeable releases of a pollutant even before an actual release of the pollutant. The courts determined that Rule 1410 was a valid exercise of an air district’s authority based on the “possibility of an accidental release” of HF.

In fact, courts employ a highly deferential standard of review to air district regulations.⁴⁷ An unlawful regulation must prove “so palpably unreasonable and arbitrary as to show an abuse of discretion as a matter of law.”⁴⁸ They must reach the level of “arbitrary, capricious, or without reasonable or rational basis” and be “*entirely* lacking in evidentiary support.”⁴⁹ In adjudicating the legality of an agency regulation, a court will only inquire as to whether the

⁴⁴ See *Sherwin-Williams Co. v. South Coast Air Quality Management Dist.* (2001) 86 Cal.App.4th 1258, 1273; *Mobil Oil Corp. v. Superior Court* (1976) 59 Cal.App.3d 293, 305; *Ultramar, Inc. v. South Coast Air Quality Management Dist.* (1993) 17 Cal.App.4th 689.

⁴⁵ *Milton H. Lees v. Bay Area Air Pollution Control Dist.* (1965) 238 Cal.App.2d 850, 857.

⁴⁶ *Id.*

⁴⁷ See, e.g., *Sonoma County Water Coalition v. Sonoma County Water Agency* (2010) 189 Cal.App.4th 33 (holding that even though the Coalition may have had a “fair argument,” the agency was afforded deference regarding its projections of the county’s water supply); *California Bldg. Industry Ass’n v. San Joaquin Valley Air Pollution Control Dist.* (2009) 178 Cal.App.4th 120, 133-34 (finding the district’s use of an air quality model valid despite expert disagreement because “it was up to the District to decide which expert opinion to accept”).

⁴⁸ *Ass’n of Irrigated Residents v. San Joaquin Valley Unified Air Pollution Control Dist.* (2008) 168 Cal.App.4th 535, 552.

⁴⁹ *American Coatings Ass’n v. South Coast Air Quality Dist.* (2012) 54 Cal.4th 446 (emphasis added).

agency has demonstrated a *rational* connection between the relevant factors and the adopted rule.⁵⁰ As detailed herein, adoption of Emission Caps are necessary to protect public and worker health and safety and maintain California's climate goals, and far exceeds such a standard of review.

II. Development of an Environmental Impact Report Is the Proper Procedural Avenue to Develop or Clarify Necessary Findings

The Air District “agrees that its legislative authority is broad enough to establish [E]mission [C]aps.”⁵¹ The Air District's reluctance to proceed with adequate administrative procedures regarding the Emission Caps proposal rests with the assertion of the need to still establish a record.⁵² For the reasons detailed herein, the commenters believe that such a record has already been established. Nevertheless, the time to determine whether that record is adequately supported is during the CEQA review process:

A fundamental purpose of CEQA review is to provide decision makers with information they can use in deciding whether to approve a proposed project [or rulemaking], not to inform them of the environmental effects of projects [or rulemaking] that they have already” decided to adopt.⁵³

The California Supreme Court has made this point clear: if decisions as to which project to adopt were made prior to CEQA review, it would turn those environmental review mandates on their head, and “EIR's would likely become nothing more than *post hoc* rationalizations to support action already taken.”⁵⁴ In other words, should the Air District still believe that a record supporting adoption of Emission Caps is lacking, it should for that very reason immediately commence CEQA review of the much-needed proposal to demonstrate its unequivocal benefits to climate, and public and worker health and safety.

The commenters support the Air District Board of Directors' recent direction to Air District staff to immediately commence this CEQA review. In addition, we clarify that such adequate review must consider the proposed Emission Caps as a proposed project, versus under an insufficient and less robust alternatives analysis.

III. Emission Caps Are Necessary to Prevent Increased Pollution from Refining Lower Quality Crude Oil Feedstock in the Bay Area

Lower Quality Oils Are Replacing Traditional California Sourced Oils

It is well documented that Bay Area refineries are shifting to lower quality oil feedstock. The continuing substantial decline in their current and traditional major oil feedstock sources

⁵⁰ *Id.*

⁵¹ Attachment 10G to Stationary Source Committee Meeting Agenda, September 21, 2015 “Concerns about Setting Numeric Caps at Current Levels,” available at http://www.baaqmd.gov/~media/files/board-of-directors/2015/bod_agenda_100715.pdf?la=en.

⁵² *Id.*

⁵³ *Laurel Heights Improvement Ass'n. v. Regents of University of California* (1988) 47 Cal.3d 376, 394.

⁵⁴ *Id.*

requires the refiners to switch oil sources in order to maintain production.⁵⁵ The industry and the refiners themselves have asserted repeatedly and unequivocally that they seek a switch to new oil feedstock including tar sands bitumen-derived oils, an extremely low-quality refinery feedstock.⁵⁶ Multiple independent expert analyses of specific projects proposed and planned in virtually all major parts of the Bay Area refining industry confirm that refiners are committing long-lasting capital infrastructure for this purpose.⁵⁷ In fact, the potential for an imminent shift to lower quality oil feedstock in the Bay Area refining industry is beyond reasonable dispute.

Refining Lower Quality Oils Increases Air Pollution

The Air District 2012 Concept Paper asserted that “the use of lower quality crude at refineries could . . . increase emissions of air contaminants . . . Emissions could also increase as a result of accidents related to the increased corrosiveness of lower quality crudes.”⁵⁸ Recently, the Air District has repeated the essence of this finding in different words, stating that changes in crude “can result in significant changes in combustion needs” at refineries.⁵⁹

Multiple expert analyses and peer-reviewed reports document this relationship. This evidence has found a direct causal relationship between lower quality oil feedstock, increased refinery energy intensity, and increased refinery emissions of CO₂ and other combustion products, including PM, NO_x, and SO_x. In addition, this causal relationship between lower quality oil feedstock and increased refinery emissions is quantitatively predictable across the refining sector for a given product slate.⁶⁰ Further, the US Chemical Safety Board found a direct causal relationship between lower quality oil feedstock and the mechanical causes of catastrophic fire and air pollution episodes at Bay Area refineries. Two examples of these catastrophic episodes are the corrosion caused by a denser crude feed in the fatal Tosco Martinez refinery fire of 1999,⁶¹ and the pipe corrosion failure accelerated by higher sulfur oil in the Chevron Richmond refinery fire that sent some 15,000 residents to seek medical attention in 2012.⁶²

⁵⁵ See California Energy Commission data (*Oil Supply Sources to California Refineries: Crude Oil Supply Sources to California Refineries*, http://www.energy.ca.gov/almanac/petroleum_data/statistics/crude_oil_receipts.html) and forecasts (*Transportation Energy Forecasts and Analyses for the 2009 Integrated Energy Policy Report*; 2010; CEC-600-2010-002-SF; pages 134–143; and *Transportation Energy Forecasts and Analysis for the 2011 Integrated Energy Policy Report*; 2011; CEC-600-2011-007-SD; pages 195–207), California Energy Commission, Sacramento, CA.

⁵⁶ See the expert analysis and evidence discussed in and provided as attachments to Communities for a Better Environment’s *Supplemental Comment on Air District Staff Proposal, Rules 12-15 and 12-16; Evidence of Increasing Bay Area Refinery GHG and PM_{2.5} Emissions*; provided for the record in this matter on 21 October 2015.

⁵⁷ See for example the discussion of expert opinions on Chevron’s originally proposed Richmond Refinery “Renewal Project” in *Communities for a Better Environment v. City of Richmond* (2010) 184 Cal.App.4th 70; Expert Report of P Fox and P Pless dated 5 December 2014 regarding EIR SCH# 2012072046; Expert Report of G. Karras dated 5 December 2014 regarding EIR SCH# 2012072046; Expert report of P Fox dated 27 January 2014 regarding EIR SCH# 2013071028; Expert Report of G Karras dated 23 February 2016 regarding EIR SCH# 2013071028; Expert Report of P Fox dated 8 February 2016 regarding EIR SCH# 2013052074; and Expert Report of G Karras dated 30 March 2016 regarding EIR SCH# 2013052074.

⁵⁸ *Id.*

⁵⁹ May 2016 Draft Staff Report for Rule 12-16, *Options for Reducing Refinery Combustion Emissions*, at 6.

⁶⁰ See the expert analysis and evidence discussed in and provided as attachments to Communities for a Better Environment’s *Supplemental Comment on Air District Staff Proposal, Rules 12-15 and 12-16; Evidence of Increasing Bay Area Refinery GHG and PM_{2.5} Emissions*; provided for the record in this matter on 21 October 2015.

⁶¹ *Investigation Report: Refinery Fire Incident*; Report No. 99-014-I-CA; March 2001, available at www.csb.gov.

⁶² *Interim Investigation Report: Chevron Richmond Refinery Fire*; final report adopted 19 April 2013, available at www.csb.gov.

Importantly, some of these impacts are documented industry-wide by publicly available data. As one peer reviewed study⁶³ reports, “[s]trongly coupled increases in energy and crude stream processing intensities with worsening oil quality [were shown based on] observations from operating plants across the four largest U.S. refining districts over 10 years.” And as another study⁶⁴ reports, refinery “energy use has a positive linear relationship with GHG emissions.”

The Air District has resolved to reduce Bay Area climate disrupting emissions to 80% below 1990 levels by 2050,⁶⁵ and plans to reaffirm this goal in its upcoming 2016 Clean Air Plan.⁶⁶ These GHG reduction goals are in jeopardy if refineries begin processing lower quality oils without an adequate backstop to prevent the consequent massive increase in GHG emissions. In addition, the Air District recently issued its “Five Point Action Plan to Address Refinery Emissions,” which specifically stated a goal to “cap” criteria pollutants and otherwise ensure that refinery feedstock changes do not “increase health burden[s].”⁶⁷

Emission Caps Prevents Those Increases in Air Pollution

In September 2015, in order to directly address this potentially drastic increase in GHGs, PM and PM precursor emissions, CBE provided the Air District with its formal proposal for Emission Caps. The Emission Caps target four pollutants: GHGs, PM, and NO_x and SO₂ (both PM precursors). Publicly available data⁶⁸ forms the basis of these proposed limits. These limits consist of the maximum-year actual emissions of the refineries over the last few years, plus a “buffer” factor to account for random fluctuations in emissions.⁶⁹ As currently proposed, Emission Caps essentially keep refinery emissions of these four pollutants at current levels.

The Emission Caps proposal focuses on these four pollutants for a specific reason. Refining a lower quality oil feedstock requires increased refinery cracking processes, fuel combustion and hydrogen production.⁷⁰ These same refinery processes are the largest sources of GHG and PM emissions.⁷¹ As these processes work harder, emissions of those pollutants increase. As stated, there is a clear and quantifiably predictable causal relationship between lower quality oil feedstock, increased refinery energy intensity, and increased refinery emissions

⁶³ Karras, 2010. Combustion Emissions from Refining Lower Quality Oil: What is the Global Warming Potential? *Environmental Science & Technology* 44(24): 9584–9589. DOI: 10.1021/es1019965.

⁶⁴ Abella and Bergerson, 2012. Model to Investigate Energy and Greenhouse Gas Emissions Implications of Refining Petroleum: Impacts of Crude Quality and Refinery Configuration. *Environmental Science & Technology* 46: 13037–13047. DOI: 10.1021/es/3018682.

⁶⁵ Bay Area Quality Management District Resolution 2013-11, Adopting a Greenhouse Gas Reduction Goal and Commitment to Develop a Regional Climate Protection Strategy, available at <http://www.baaqmd.gov/~media/files/board-of-directors/adopted-resolutions/2013/2013-11.pdf>.

⁶⁶ Bay Area Air Quality Management District Draft Staff Evaluation Report, Options for Reducing Refinery Combustion Emissions (June 15, 2016), available at http://www.baaqmd.gov/~media/files/board-of-directors/2016/bod_agenda_061516-pdf.

⁶⁷ Five Point Action Plan for Reducing Refinery Emissions, available at <http://www.baaqmd.gov/~media/files/board-of-directors/2015/z-presentations/052715-ssc-presentations.pdf?la=en>.

⁶⁸ See CBE Comment, Proposal for Enforceable Numeric Limits on Refinery-wide Emissions to Stop Increasing Greenhouse Gas and Particulate Matter Air Pollution [Rule 12-16], September 18, 2015, pp.5-6, detailing selection of 2011-2013 data as representative of current refinery-wide emissions.

⁶⁹ *Id.*

⁷⁰ See Attachment A at 3-4.

⁷¹ *Id.*

of CO₂ and other combustion product pollutants. Moreover, these refinery combustion emissions include PM and the PM precursors NO_x and SO₂. Evidence developed during this rulemaking shows that PM, NO_x, SO₂, or more than one of these pollutants that cause PM_{2.5} air pollution, co-emit with GHGs from at least 379 sources in the Bay Area refining industry.⁷² The direct relationship between the increases in these pollutants and increased refining of lower quality oils, calls for more stringent preventative regulations to stop emissions of those local and climate damaging pollutants from increasing.

Because of the relationship between emissions of targeted pollutants and the quality of oil refined, adoption of Emission Caps would also help to limit the use of more corrosive, inherently hazardous refinery oil feedstocks, thereby reducing the likelihood of episodic emissions from flaring and catastrophic incidents.

Emission Caps prevent an increase in emissions from refining lower quality oil in order to protect public and worker health and safety, and in order for the Air District to meet its broader GHG emission reduction goals. Air District reports have stated the same. The Air District's 2012 Concept Paper called for a "backstop" to increasing refinery emissions. Similarly, the Air District's recent staff report concluded that "refineries are a top priority" on account of impending changes in crude quality.⁷³ This is further clarified in the Air District Resolution 2014-7, directing the proposal of a backstop that will "set emissions thresholds and mitigate potential emissions increases" because Bay Area refineries are undergoing infrastructure and crude slate changes that can "result in significant worsening of air quality."⁷⁴ The record clearly establishes the need for Emission Caps as a backstop to increasing pollution from refining lower quality oil feedstock.

Facility-wide limits on air pollution are also far from a novel concept. To the contrary, air districts have a history of facility-wide emissions regulations. For instance, SCAQMD's Rule 1420 does not allow a lead-processing facility to discharge emissions above a certain ambient concentration.⁷⁵ Federal and state regulations have also targeted facility-wide emissions. The US EPA recently adopted facility-wide benzene sampling limits as part of its fence line monitoring rule.⁷⁶ In 2006, California enacted Senate Bill 1368 (Perata), providing facility-wide limits on GHG emissions from power plants.⁷⁷

Finally, the Air District's current regulatory framework is simply not capable of addressing the increasing pollution from refineries on account of the quality of oil refined. PM emissions from refineries include environmentally significant amounts of ultra-fine PM ("UFPM"). The Air District does not currently measure or otherwise effectively control UFPM.

⁷² CBE Supplemental Comment on Air District Staff Proposal, Rules 12-15 and 12-16; Evidence of Increasing Bay Area Refinery GHG and PM_{2.5} Emissions, October 21, 2015.

⁷³ Bay Area Air Quality Management District Draft Staff Evaluation Report, Options for Reducing Refinery Combustion Emissions (June 15, 2016), at 1-7, available at http://www.baaqmd.gov/~media/files/board-of-directors/2016/bod_agenda_061516-pdf.

⁷⁴ Bay Area Quality Management District Resolution 2014-7, Addressing Emissions from Bay Area Petroleum Refineries, available at <http://www.baaqmd.gov/~media/files/board-of-directors/adopted-resolutions/2014/2014-07.pdf>.

⁷⁵ SCAQMD Rule 1420 Emissions Standard for Lead, available at <http://www.arb.ca.gov/DRDB/SC/CURHTML/R1420.HTM>.

⁷⁶ See Federal Register, Vol. 80, No. 230, December 1, 2015 at 75192, available at <https://www.gpo.gov/fdsys/pkg/FR-2015-12-01/pdf/2015-26486.pdf>.

⁷⁷ See SB 1368 Emission Performance Standards, available at http://www.energy.ca.gov/emission_standards/.

Other pollutant specific air quality rules regulate certain pollutants from certain sources at refineries, but not comprehensively. For instance, SO₂ has certain concentration limits at certain refinery process units, such as sulfur recovery units or catalytic cracking units; NO_x is also regulated, but only for boilers, process heaters and steam generators.⁷⁸ Remarkably, however, none of the Bay Area refineries have “overall mass emission limits that apply to the entire refinery.”⁷⁹

The Air District’s current discretionary policies for implementing Regulation 2, Rule 2 (New Source Review [NSR]) as it applies to refinery operations, and its lack of adequate emission and monitoring standards in pollutant specific rules, such as Regulation 6 (Particulate Matter), have also proven insufficient to deal with this problem of increasing pollution. Much of this is attributable to years of permitting decisions that ignored changes in upstream raw materials (i.e. the quality of crude slates) and existing upstream physical limitations on production increases. At the same time, permitting decisions classified changes to downstream infrastructure as “alterations” rather than “modifications.” An accurate classification as a modification would have triggered Best Available Control Technology requirements, as well as throughput and emission limits. Instead, by classifying such changes as merely alterations, refineries “de-bottlenecked” operations over time, and grew their capacity without triggering a full and adequate NSR.

Permits for new and modified sources from virtually all industries in the Bay Area, other than refineries, include permit conditions that specify the composition and quantity of raw materials used for their processes. Those industries therefore have facility-wide emission caps. If Air District refinery permit decisions had considered upstream material feed and existing upstream physical process limitations, far more refinery project applications would have received adequate review as modifications, instead of alterations. These projects thus would have been permitted with more environmentally protective emission limits. Throughput and emission limits on virtually all refinery-processing equipment would have been imposed long ago. Today, it is long past the time for the Air District to establish an effective regulatory structure to address known increasing emissions from refining a lower quality oil feedstock, and also, the significant increase in episodic emissions, should they consequently occur.

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⁷⁸ BAAQMD Regulatory Concept Paper, Petroleum Refining Emissions Tracking Rule, Draft, October 15, 2012, citing The U.S. Oil Refining Industry: Background in Changing Markets and Fuel Policies” (Nov. 22, 2010), available at http://www.baaqmd.gov/~media/files/planning-and-research/rules-and-regs/workshops/2013/1215_dr_rpt032113.pdf?la=en.

⁷⁹ *Id.*

IV. Conclusion

For the reasons stated above, adoption of the Emission Caps is consistent with the requirements of the Health and Safety Code, would complement and further the goals of AB 32, and would not constitute a “takings.” CEQA is the proper procedural avenue to develop or clarify necessary findings supporting adoption of Emission Caps. Finally, in light of the time-sensitive and important need for this protective measure, we also agree with the Air District Board of Directors’ direction to prepare this measure for an adoption hearing “as expeditiously as possible.”

Respectfully Submitted,

Roger Lin, Staff Attorney
Richard Treadwell
Dana Bass
Daniel Lopez
on behalf of Communities for a Better Environment

Laurence G. Chaset, Attorney at Law
Sustainable Energy Futures
on behalf of 350 Bay Area

Devorah Ancel, Staff Attorney
on behalf of Sierra Club